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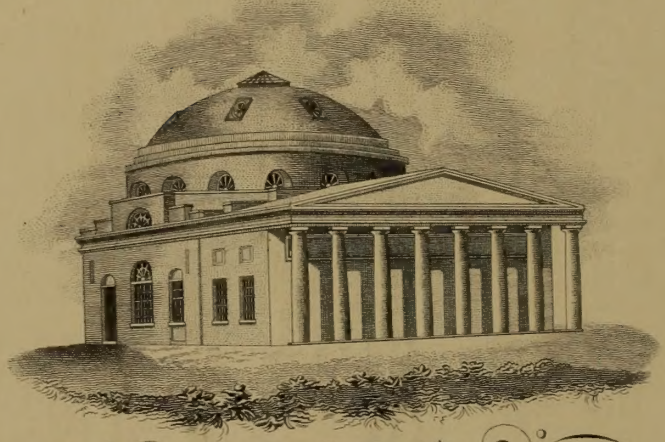

University of Maryland

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University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1812-1887. The individual dissertations were bound together from 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were: Richard J. Ba[illegible] Historical Librarian/Preservation Officer, Maria Milagros Pinkas, Metadata Management Librarian, Angela Cochrane and Carol Harding-Henry, Resources Division; Sarah Hartle[illegible] Scherer and Megan Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archives (archives.lib.umaryland.edu) and the Internet Archive (www.archive.org).

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Raburg, Christopher W.	Variola Vaccina	

HSHSL 2011 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title	Bound out of order
Boarman, Charles S.	Cholera Infantum	
Mead, Walter C.	Cholera Infantum	
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[1] Pages 21-30 are upside down and in reverse order. Pages 31-37 are found later in this volume.
[2] Bound upside down and in reverse order. Pages 6-19 and an unnumbered page are found later in this volume.

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Author	Title	Bound out of order
Collier, Thomas H.	Principles of the Pathology and Treatment of Congestion	p. 31-37[3]
Patterson, John H.	Mercury	p. 6-19[4]
Matthews, Thomas	Phthisis Laryngea	

[3] Upside down and in reverse order. Page 1-30 are found earlier in this volume.
[4] Includes one unnumbered page between pages 16 and 17. Pages 1-5 are found earlier in this volume.

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UNIVERSITY OF MARYLAND

THESES

1837

Guy, James C.	Importance of Physical signs in the Diagnosis of Diseases of the Chest	14p.
Stewart, Benjamin W.	Situs et Causa Insaniae	15p.
Digges, William D.	Syphilis	28p.
Pearce, Ross	Carcinoma	18p.
Callaway, Paul C.	Chemical Properties and Medical Uses of Iodine	24p.
Hall, George Nelson	Hemorrhage	25p.
Chaisty, Edward J.	Ascite, Seu Abdominis Hydrope	15p.
Edelen, Benjamin	Spinal Irritation	22p.
Robertson, Charles H.	Mercury	16p.
Benson, John A. D.	Remittent Fever	19p.
Stone, Thomas I.	Delirium Tremens	12p.
Byrne, John	Homoptysi	19p.
Harrison, John S. Jr.	Bronchocele	14p.
Levering, James	Scarlatina	16p.
Byrne, Edmond	Acute Inflammation of the Peritoneum	8p.
Dashiell, Nicholas L.	Dysentery	24p.
Raburg, Christopher W.	Variola Vaccina	14p.
Boarman, Charles S.	Cholera Infantum	14p.
Mead, Walter C.	Cholera Infantum	20p.
Duvale, Philip B.	Remitting Fever	26p. 38p.
Gray, John D.	Haematemesis	26p.

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Bird, Benjamin L.	Dysentery	24p.
Nelson, Joshua R.	Tubercular Consumption	13p.
Shipley, George S. D.	Cholera Infantum	30p.
Waters, Henry	Cynanche Trachealis	22p.
Beckwith, John B.	Epilepsy	25p.
Boon, John F.	Hydrocephalus Internus	28p.
Jenifer, Daniel of St. Thomas ~~Jinfs, H. Thomas~~	Goitre	12p.
Lyles, W. Durham	Sanguinaria Canadensis	11p.
Cockrill, James J.	Canine Madness	39p.
Wroth, Thomas G.	Indigestion	21p.
Tatman, C. D.	Helminthologia	28p.
Collier, Thomas H.	Principles of the pathology and treatment of Congestion	37p. (1)
Patterson, John H.	Mercury	19p. (2)
Matthews, Thomas	Principles of the Pathology of Congestion Phthisis Laryngea	30p. (3)
Collier, Thomas H. Patterson, John H.	Mercury	(4)

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(1) p. 1-30 - Bound out of order. Some pages upside down.

(2) Bound out of order. Some pages upside down.
(3) P. 31-37. Upside down and in reverse order
(4) p. 6-19 (one unnumbered).

1837

An
Inaugural Dissertation
on the
Importance of Physical Signs
in the
Diagnosis of diseases
of the Chest.
Submitted to the examination
of the Provost
Trustees & Medical Faculty
of the University of Maryland
for the degree
of Doctor of Medicine
by
James C. Gary
of Virginia

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Like all new introductions, that of the examination of diseases of the chest by physical means has had to undergo the usual ordeal, the lash of criticism and denunciation; and then on the other hand to be received with an enthusiasm in which its pretensions are sung with no less vehemence. As it is and ever has been the custom to receive or condem any thing and every thing for the most part, purely upon hypothetical grounds, it is not to be wondered that the subject which we have selected should be totally disregarded by some, and by others admitted only as an accomplishment. While we have a number who consider these means of examining disease as useless in every respect, we have others again who admit them as auxilliaries not to be despised; and a third class who look upon Laennec as almost synonymous with the only improvements of importance which have been added, to our resources in diseases of the chest, for centuries. It is true, we should practice the most rigid scrutiny, and conviction of the utility, be it little or much, of any thing before we admit it into our cabinet of resources; for if on the contrary we were to receive every thing indiscriminately, or without due examination, it would only tend to confuse us still more and cripple those resources already relied upon. It is to be not-

lected in this age of improvement we suffer no one to impose impose upon our easy credulity, nor enter into an unqualified denunciation of any thing without having proof to sustain them. Since Pathology has been studied attentively and its paramount importance made manifest we take nothing for granted – if it sustains us we have nothing to fear. In the investigation of disease the first thing that presents itself, or should, is its pathology – We appeal to post-mortem examinations for the correctness of our views, from which there is no appeal. By the ordinary symptoms in the class of diseases which we have been speaking of, we shall find that reliance is by no means absolute, those of the varied diseases, so dovetail into each other. "It is impossible to find a standard by which to judge of the health of a function in individual cases, and as our sensations are frequently so elusive as to baffle all our attempts to trace ~~the existence of disease~~ them to their true source, the common method of diagnosis but too frequently fails to detect the existence of disease; and when the signs of disease are indubitably present we are often left in doubt as to its true nature". The constitutional symptoms, those which we have been accustomed to rely upon exclusively, have certainly, still their importance and cannot be discarded; it

is not meant to substitute physical signs for those already in use but merely to bring them to their aid – to let them go hand in hand to the rescue. Of all diseases those of the chest have been acknowledged, at all times, to partake of the greatest obscurity – hence we should be exceedingly cautious how we reject even the most insignificant offers of assistance. The symptoms that ~~were~~ once pathognomonic are now no longer so, and the diagnosis has been as confused and uncertain. We have been, evidently, in need of something else than than the constitutional symptoms in order to form a clear and satisfactory opinion of the proper organic or functional lesions of the lungs. The diseases are variously divided and subdivided but the symptoms of one and all sometimes simulate each other so closely, and indeed, with the exception of something trifling, upon which we can place no reliance, are not unfrequently identical, that we can be governed in practice only by a few general principles – without being acquainted with the correct pathology of the disease in question, and by consequence kept ignorant of the relative danger of our patient. The pathologist has discovered with much accuracy that the lungs are subject to various pathological conditions, distinct in their character – and hence the nomenclature we have corresponding to such

differences; but our difficulties are by no means removed here — we want means to appreciate those differences. The uses of physical signs are founded upon the operation of known laws of natural phylosophy upon our senses; they are indicative of the physical conditions of organs, and are as certain as the laws which govern them are unerring. They may ascertained with more or less precision according as the relation of these signs to their physical states are more appreciable to the senses. Individuals deprived of sight substitute perfection of tact and hearing which compensates for their imperfection in vision — In the same way we, by constant exercise and attention may so perfect the sense of hearing as to make it available to us in the investigation of objects beyond the sphere of tact and vision. Sound we know is both generated and propagated by solids liquids and air, each of which we meet with in our physical investigations. All substances are not equally good conductors. We may say in general terms, that those substances are the best conductors which approach in uniformity of texture to the body in which sound is generated. I shall not attempt to go into a discussion upon accoustics, for I know little or nothing about them — nor is it necessary to our purpose, which is merely to speak

in a superficial manner of the importance of physical signs as declared by their verification by long experience and laborious investigation. There are two classes of sounds from which we obtain information of the condition of the Thoracic Viscera; one produced by their natural movements against the parietes of the chest, and the other artificially by striking the chest — the former, termed auscultation, and the latter percussion. Auscultation is either, mediate or immediate; immediate where the ear is directly applied to the chest, mediate where such an instrument as the Stethescope is made use of.

Respiration and voice are objects of primary importance. The general character of healthy respiration may be rendered so familiar by examination, that it will require but slight experience to distinguish it from that produced by an abnormal condition of the Thoracic Viscera — these abnormal conditions must necessarily modify in intensity ~~and~~ the character of the respiration and voice. From the very ~~nature~~ of these physical agencies, we must conclude, that in these affections the diagnosis must be more or less clear. Depending upon a certain normal condition of the pulmonary apparatus, the respiration must manifest itself in a constant

and invariable manner – except where it is modified by individual peculiarity. When, however, a part of the apparatus becomes deranged, it necessarily follows that corresponding changes take place in the character of respiration and resonance upon which is founded the basis of auscultation; for it appears we have a modification of respiration and resonance of voice for each. If this be the case, the appreciation of physical agencies is easy and reasonable. Their application however, is difficult and requires practical experience to make the best use of them; but this we find in the elucidation of all diseases, and therefore constitutes no objections.

A disease or two of the chest will be noticed to the further examination of these physical signs. Pleurisy is one of our most common diseases and none thought to be so easily recognised; and yet how many cases must be overlooked, and how many confounded with other diseases, or these last confounded with them. What conflicting opinions we have upon such like cases – all referring to the standard symptoms as their guide – some relying most upon a particular symptom or the absence of that, others again reasoning upon the principle of exclusion, nail it to the counter. We have in a case of acute pleurisy

severe pain on one side, dyspnœa, cough, expectoration of a thin frothy character, tense and vigorous pulse, great anxiety, suffusion of the cheeks, tongue covered with white fur, hot and dry skin, and inability to lay on the affected side: these are the most characteristic functional signs, but when we come to analyse them we shall find that they are by no means peculiar to the disease under consideration, under all circumstances; and were we to exclude all cases that had not these well marked symptoms or most of them, many well marked cases by physical signs would go unobserved, or rather be mistaken for something else. There are very many well authenticated cases, in which pleurisies were present without pain and cough but little dyspnœa or any very great inconvenience. Doct: James Jackson Jr relates some interesting cases of this kind – One, a friend of his complained of slight indisposition, trifling pain & as much cough. He had no suspicion of Pleurisy or any thing more than a slight Catarrh, but jestingly applied the Stethescope when he discovered to his surprise Ægophonism, which may be considered pathognomonic of this disease; but it is only in the incipient stage, and towards convalescence, that is when the effusion is slight that this sign can be produced –

Laennec tells us that this disease is almost invariably connected with effusion—and that he has discovered it a few hours after the attack. When considerable, the respiratory murmur, which a short time before was quite distinct, with Aegophonism, becomes obscure, if not imperceptible except at the root of the lungs where they are compressed against the spine—contrasting very strongly with that resonance of the unaffected side. The respiratory murmur here is unusually vigorous in consequence of the increased necessity, and we may even be mistaken without care that we hear it on the affected side, sound being transmitted from the healthy lung. It occasionally happens that Aegophony is heard throughout the disease, and this is accounted for by the lung being bridled up, as it were, by old adhesions. Pleurisy occurs also as a secondary lesion in some diseases, and may prove the efficient cause of death; and that too under circumstances where its rational symptoms would rarely if ever, point out its existence; besides it is only by the physical signs that we can trace the various changes which supervene during its progress, and mark the amount of effusion and its gradual diminution. Another physical sign of importance, is the increased capacity of the

chest from effusion. This is sometimes very perceptible, and when existing to some extent the symptoms of the more acute stage may subside, and give us a delusive hope of speedy recovery; the pain is slight, increasing appetite, little cough, except from exertion, and yet we are told the chest may be distended with water. What but physical signs, or something else than the ordinary functional symptoms could here ~~give~~ completely elucidate the condition of the patient? The altered aspect of the chest want of respiratory murmur, except on the posterior of the chest, puerile respiration on the unaffected side, dullness on percussion, taken in connection with the previous condition of the patient, gives us a true exposition of the disease, and warns us of the lurking disorder and its consequences, which if not attended to may end in some serious organic lesion. By practicing, from time to time auscultation and percussion, we shall discover that absorption is going on, and when the fluid becomes slight we distinguish Ægophonism, which is an evidence that the disease is yielding; and we announce recovery complete when the respiration is free a clear resonance, and all those signs observed in healthy respiration.

In Pneumonia, we have a distinct pathological condition. We have here an affection of a mucous membrane, cellular tissue and so on; in pleurisy a serous membrane alone. In spite of this, however, the diagnosis is not unfrequently equivocal. We encounter cases of Pneumonia, where, at first there is little or no expectoration, or if any not of that character which belongs to this disease, and in which the pain is as sharp and acute as that of pleurisy. The face too is seen without that vivid flush, which is considered as one of the strong characteristics of pulmonary inflamonation; and as to the pulse, it is admitted on all sides that ~~we~~ can learn very little from it. The different stages have each their appropriate signs — from simple engorgement, to hepatization and suppuration. In the first the crepitant rale alone is heard — small bubbles are heard bursting through a thin fluid, resembling the crepitation of salt when thrown upon hot coals, There is still a resonance upon percussion, and the respiratory murmur is yet audible, but its intensity is diminished. The extent of the rale marks out the extent of the disease. In hepatization the ~~resp~~ respiratory murmur is gone — nor have we any rale. Percussion

gives a dull, flat sound, Bronchophony and bronchial respiration succeed – the former belonging to the voice, and induced by the hepatized lung forming a better conductor, giving a loud an coarse resonance – It is produced only in the unobstructed bronchia, and transmitted as before explained. – When purulent infiltration supervens, we discover for the first time the mucous rale; for a cavity we have pectoriloquy, perfect and imperfect, which takes its name, from the voice seeming to pass thro the Stethescope to the ear – being more audible there than to the other ear ~~~~. Phthisis. Not until late years, have, the functional signs of this disease, been questioned; but there are few now, I think, who will not admit that they are not unfrequently left to doubt. It is true, that in the latter and hopeless stages, where we have purulent expectoration, cough, night sweats, great emaciation, pearly lustre of the eyes, hectic fever, and colliquative diarrhoea, we can pronounce with certainty upon the character of disease; but in other degrees, as I have said, we are by no means so sure. Every protracted cough attended with suspicions, is too frequently mistaken for this, the opprobrium medicorum; and cases of as

genuine phthisis are not unfrequently mistaken for something else. It has fallen to our lot to be a witness to some of these grave mistakes — where the disease was located in the stomach, considered as an inferior pheumonic disease, or referred to something else — The physical signs, here detected the error, and post mortem examination confirmed the truth. It is asserted, and I think reasonably, that no man, however experienced can pronounce upon a case of phthisis in its incipient stage, assisted only by functional symptoms. Where it is so far advanced as to secrete pus, still we cannot say with certainly that it is a case of phthisis; for we very well know, that chronic catarrh will assume all the prominent symptoms ~~of phthisis~~ the disease. When the tubercles are merely miliary the physical signs avail us little or nothing, but so soon as they become crude, respiration and percussion are sensibly altered — it is diminished to the extent of the part affected, and percussion gives a dull heavy sound — We have also bronchial respiration, and bronchophony — When the tubercles begin to suppurate these signs still persist, but when a cavity is formed, others more serious take their place — gargouillement, pecto-

-eiloquy, and so on, which may considered as ~~almost, if not~~ pathognomonic. The very great importance of this mode of examination, is further made manifest by the fact that phthisis may proceed throughout its whole course, and terminate fatally, and yet many of its rational symptoms may never have been revealed. We are told that from the commencement to the end, there may neither pain nor cough, and yet the lungs be crowded with tu-bercles. – In the infancy I may say of the science of auscultation and percussion we have accomplished more than the most ardent anticipated. Improvements are still being made, and I do not see why we should be discouraged, or discountenance the use of physical signs, because they cannot accomplish every thing.

Enough of them is known to warrant us in admit-ting them among our means of investigating disease & relying upon them implicitly in many instances.

Whether we are able or not to relieve the suffering of a consumptive after the disease is established, it is the duty of a Physician to know, as far as available, with-out doubt, every thing in relation to disease; and

if he has all the rational signs of phthisis, and should have a doubt, an appeal to physical signs will in most cases clear up obscurity and give a satisfaction and comfort to the practitioner which no rational symptoms could afford — I might go on to speak of diseases of the heart, but our time is so limited as not to admit of it; nor is it necessary when our remarks are so exceedingly incomplete. They are not as we intended them — The time allotted for this purpose was unavoidably interfered with — and at this late day we have had to make a hop, skip, and a jump through —

1837

Doctori N. R. Smith
Celeberrimo Professori artis medendæ, et
universâ literaturâ insigni, hoc opusculum
dedicatum est, in testimonium summæ æstima-
tionis, quo habeantur virtutes et merita ejus.—
In magnum honorem, ducimus ejus amicitiam
pro nobis manifestam.

B. W. Stewart

Dissertatio Inauguralis

De Insaniâ,

Medicæ Facultati Academiæ

Marylandiæ submissa est,

a R. W. Stewart.

Situs et Causa Insaniae.

Coram viris medica scientia eruditis, hoc tenue conamen rudis mentis offerendo, quamvis laborem arduum suscipiam tamen spero, non omnino sit indignum contemplatione.

Materia haec tam eximiae utilitatis est, ut intimis sensibus cujusque cordis inhaerere debeat, et ex bruto animo elicere consensum.

Humana mens ut ego opinor in duas partes dividi potest, Instinctum et conscientiam. Per Conscientiam intelligo istam vim ratiocinandi, et praestantiam ingenii, quo mens humana praecellit caeteris animalibus.

Quanta extenuatio existere debeat in viribus discriminandi, ut insaniam pariat?

Infiniti gradus intellectus inter se tam composite nexi et intertexti sunt, ex Polypo ad Shakesperium ut impossibile videatur regulam certam constituere, cui, qui non congruant, rationis expertes habentur.

Non est mihi in animo praeclara ingenia hominum cum bellularum instinctu componere, tamen inficiari nequitur quod saepius infirma classis humani generis magno intervallo cedit bestiis supremi ordinis. Sed tamen, de incepto digressus sum, jam veniamus de insania disserere.

Per Insaniam velim intelligere subitam vel gradatam diminutionem mentis in perfungendis suis officiis, eo modo quo solebat, antequam causa insaniae manifestare se incepit. Vecordia vel fortuita vel continuata esse potest, iniqua vel completa et non propria in omni re. Puta, ante oculos versari tibi, quendam ingenio preditum carum acceptumque sociis et omni admiratione dignum obdates animi, nihilo secius captus voluptatibus, non monitis amicorum obtemperat et fuxidatiae negligens, persequitur oblectamina vitae.

Nunc obverte caput, aspice vultum ferocem recumbentem clathris ferreis istius carceris caeci, et audi, ejus

plangorem lugubrem, vide auribus compedum tinnitum qui pedes constringunt, vide oculos cavos et inanes, qui heri specular erant vividi animi. Diffidentia obrepit animo et desperatus fit.

Naturaliter ducimur querere: quare haec mutatio sit? Quaenam sit causa hujus recordiae? Causae remotae et praevae sunt ceterarum, sed quae primarias et provocantes causas nomino sunt quidem plurimae, et inter plerumque reperiuntur, amor frustratus, ambitio, mala domestica, et falsae opiniones de cultu divino.

Tandem pervenimus ad questionem tam difficilem explicatu. Quomodo hae causae opitulantur in gignendo talem mentis aegrum morbum. Doctores metyphisice inepte et hypothetice autumant, haec, apparare corpus, et inde oriri causas excitantes, quas Democrates et Hippocrates attribuebant morboso statui hepatis; alii splenii; alius alii viscerii. Dum alii interim putabant inesse cuidam

morbo nervorum. Dr. Rush contendebat ex infinitis investigationibus locari in arteriis cerebri: affirmatque "si insania simplex vel generalis sit, nihilo tamen oriretur ex inflammatione cerebri." Si verum dicit, quum haec inflammatio fieri potest vel fortuita vel continuata, idco inflammatio haec interdum est valde brevis et fugax. Sed quando consideramus quod in quibusdam rebus homo fiat irrationalis et non in aliis, quid tunc eveniet de inflammatione? Sed longius procedit et ait, id quod pulmonis ulceratio est ad pneumoniam, hoc insania est ad phrenitem." Jam non mihi videtur possibile valde acerbam inflammationem diu manere, quin excitet suppuratum, gangraenam vel tale in iis partibus ubi residet, vitae exitiale. Et ut complures videmus vivere, multis annis totaliter insanos, jam tum vellet nos credere, hos vivere tale cerebri morbo infectos. Nam vere hoc dicit quandocunque affirmat, insaniam subsequi semper inflammationem.

Longe abest a me ut contradicam argumento hujus vere docti
sii, et celebris auctoris, sed tamen certo mihi videtur non me-
minisse, se Ruisse Rumiuit* arteriaque sui cerebri mag-
nopere incensa esse, quando voluit talem opinionem nobis
imprimere, quae est aeque falsa ac damnosa. Plane con-
cedo quod hoc imprimis insedeat menti; tamen nullam
bonam rationam unquam audivi vel legi quare fieret.
Mens et munera ejus tam intime cum corpore confun-
duntur, ut difficillimum sit eam seperatim contemplare.
Scimus autem quod mens non posset laborare sine
intermissione, et requirat requiem.
Hinc nobis perspiciendum est, mentem diu ac continenter
exagitatam esse, damnis, cupiditate, et amore male sano, po-
tuisse enite causam excuse quae sibi tam molesta sit ac
si non conatur sed occumbit, subito fit perturbatio
mentis; si quando tamen facit conamen et non succedit,
mens sub imperio voluntatis non compressa, suae vires

* Rush-ing a-head.

sibi deficiunt omnino et ita defessa fit quod neque huic nec alteri impressioni queat respondere. Et sane videri est quomodo insania existere potest in quibusdam casibus et non in aliis, secundum hoc idem principium: Quum mens est exhausta viribus in hoc articulo praecipue, et non in alio.

Homo cupidissimus divitiarum, quum subito et ex improviso factus sit dives, priusquam inflammatio subeat, aliquandiu potest inani vel vacuo animo gaudere. Etiam timor subitaneus et improvisus, dolor vel gaudium instanter insaniam excepit.

Ad haec, saepius homo qui vecordiam perpessus est ex amore frustrato manet securus et immemor causae quae illam procuravit. Vere, est similior variolis et caeteris contagiosis morbis quam phthisi; nam ut haec propensionem omnem in corpore ad hoc, malum exhauriunt et securum reddunt adversum secundam ejusdem morbi tentationem, ita vecordia ex amore profecta animi

affectibus efficit nec amplius ex eodem loco tentamina sustinet.

Jam examinare debemus quaedam argumenta oblata per Dr. R. Quare non credebat insaniam esse in animo. Ait, "huic doctrinae adversor, quia mens non operatur nisi cum servitio corporis." Hoc quod objicitur videtur tam exile quod non meretur responsum. Equidem ille ipse hoc idem refutat quando ait, "Quis non flumina eloquentiae et ingenii in cellulis Xenodochii audiveret" Secundo, "Objicio quia non nisi dua exempla citanda sunt, quibus cerebra reperta fuerunt morbidâ specie carentia in his qui mortui sunt ex vecordia. unum exemplum narratur per Dr. Stark alterum per Dr. De Haen, haec provenerunt fortasse ex eo quod cerebri morbus longius processit quam necesse fuit ut inflammatio formetur."

Congruentiam harum objectionum equidem non video. Non intelligo eum, cum dicit "haec fortasse provenerunt ex eo quod cerebri morbus acrior fuisset quam inflammatio

postulabat, ut formetur." Praecipue cum jam dixisset insaniam semper subsequi inflammationem.

Iterum dicit, "Si insaniae conditiones exclusive in mente residunt, invenire debet post unamquamque mortem hujus morbi, sana et salubra conditio cerebri." Hic adnotandum est, non nego inflammationem cerebri saepe esse causam insaniae. Credo quod salubra officia unius, optime nituntur sanae conditioni alterius. In omnibus exemplis jam citatis, considero morbidam speciem cerebri esse effecta, non causas morbi.

Decit, 3°- "Quia non sunt exempla primariorum affectuum animi, quales, dolor, amor, ira vel desperatio quae insaniam ferant, priusquam in corpore quaedam signa mutationis introduxisent - ut vigilantiam, turgidum pulsum, aridam cutem et alia praemonita malae corporis habitudinis." In hoc nihil objectus vidio. Ex argumento concedit, dolorem, amorem, iram, et desperationem

insaniam promovere, non nisi alia perspicta sunt signa malae corporis habitudinis," quae mutationes obviae denotant progressum mentalis morbi in corpore.

Agnosco meam imperitiam pensum rite absolvendi quod infeliciter suscepi.— Et quanquam dogmata hujus celebris viri honorifice aspicio, cogor dicere, secundum meam sententiam haec non addere honorem ejus caeteris scriptis. Mihi quidem videntur longe quaesita, et nostris judiciis ingessit, modo ut speciosam faciem daret falsis opinionibus ejus fervidae mentis. Restat adhuc, ut in eo manifeste videatur ingens amor vel cupiditas rerum novarum, quae studia abunde reperiuntur in quibusdam hominibus, praeclarae famae, qui invito judicio, se patiuntur abripi ingenii fallaciis, ad nova et inaudita dogmata constituenda.

Nimis me videar audax in denunciationibus meis: sufficiet fortasse offerre quaedam de ejus argumentis, et

ad quem finem perducant exquirere. In primis, ait, "Et morbida specie in cerebro interempte Insania."

"Hae fere ejusdem generis sunt ac quando quis moritur gravescente Phrenitide, Apoplexi vel caeteris malis, et nemo negat has affectiones pertinere ad Arteria Cerebri. Illa breviter enumerabo. 1m. Non restat vestigium morbi. post alios morbos violentos, desunt Inflammationis notae.

Dr. Stevens in sua Oratione Inaugurali edita anno milesimo octingentesimo undecimo, nominavit haec species veresimilem sanitatis, sanguineum Inflammationis Statum." Nobis fuisset perutile si explicuisset modum, quo, Absentia signi morborum probat Inflammationem extitisse, et multo minus quomodo fieret Causa Insaniae. Precipue ut paulo ante dixerat, non nisi duo exempla reperta esse, in actis relata, in quibus Cerebrum non erat morbida specie affectum, unum traditum a Dr. Stark alterum a Dr. De Haen.

Quid adeptus est ex speciebus? Nonne incisiones indicant easdem notas inflammationis post mortem, ubi prius minima alienatio mentis comperta fuit? Fugit questionem tantum dicendo, "in hoc casu, ubi locum in cerebro mens non tenebat, ibi morbus existitisse potuit, vel quod mens translata fuisset in aliam partem cerebri saniorem." Rusus ait, si concederem objectum cui adversatus sum, obesse Insaniae affere morbum arteriarum, tunc nimium probaret, non aliquando similem speciem morbi deligimus, in cerebro post mortem existentem, quae Apoplexin et paralisin genuissit, ubi etiam hujus morbi nullum symptoma precedebat." Non nego pro re, nimium probaretur. Velim querere, si quando ego contendo; notas Inflammationis in cerebro sepe post mortem existere, num ergo mihi sentiendum est, communem speciem Apoplexis vel paralisis et cetera, nunquam inveniendam post obitum, nisi hi morbi precedebant?

Admissurus notas non minus certas inflammationes inherere hepari, splenii et stomacho et visceribus. Ait, "Hæc promoventur vehementi diuturnoque mentis exercitio quo viscera excitantur et debilitantur, et hoc absolute inflammationem et obstructiones conducit. Vel in secundo loco, illiciuntur ex mente suis sensibus impacta insaniam referente, tanta est vis ejus ut implicat irritationem morbificam visceribus, et ita inflammatio et obstructiones erantur." Eandem causam potuisset attribuere cerebro.

Rusus, "Debeo concludere in primo in arteriis cerebri insaniam locatam esse, et remediis quæ citissime et medentur. Jam pro certo habeo, si mens tam conjuncta sit corpori, ut sua affinitate in miseriis relevari posit, ita vice versa, corpus morbo implicitum, per eandem causam multum auxilium recipiet ex officiis animi. Quid aliud significari vult, nisi quod corpus interventione animi relevatum et recreatum, animus accipit

et transmittit sanam impressionem in eam regionem corporis ad morbos depellendos.

Non est facile dictu, quomodo corporei morbi depelluntur per remedia menti administrata. Sumus hoc facilius intelligere quam explicare. Sequens ratiuncula probabit suas consequentias esse illogicas.

Sana et salubris aestimatio et consideratio animi, quo ad corpus dependent, omnino in sana ac salubri conditione partium, quae ex corpore animo impressuras convehunt.

Inflammatio cerebri et nervorum est insana et insalubris conditio partium, quae menti ex corpore impressuras convehunt.

Ergo, inflammationem cerebri quae est insana et insalubris condicio partium, quae has impressuras imprimunt, animus, debet recipere et referre sanam ac salubram impressuram ad morbum depellendum.

Denique, suam individuam sententiam acriter sustinet

pulsus his factis 1°. Inflammatio cerebri afferre insaniam potest. 2°. Morbus subsequitur plenum et frequentem pulsum. Concedo cerebri inflammationem sæpius ad insanitatem perducere. Sed unoquoque casu, ubi insania non est effectus, injuriae illatae cerebro vel non orta sympathiâ, mihi persuasum est morbidas facies organi post mortem observatas, effecta et non causas esse morbi.

Quod plenitudo et frequentia pulsus antecunt morbis, non est minus certum. Sæpe tamen, quem consideramus, veram et vitae-coequalem amicitiam, indissolubilitatem unitam et conjunctam in omnibus membris humanae fabricae, quae Anima cognominatur, sympathia, intercommunio sensuum &c. - Non rationi obstabit credere animum et corpus esse inter se cognatum et conjunctum ac mens, et cerebrum. Hinc Richerand ait, "Novi hominum eruditum qui in ardore componendi cier symptoma cerebralis febris. Facies ardescit, oculi gliscunt, pulsant

Carotides violenter; Venae jugulares tument. Omnia indicant sanguinem ad cerebrum transferri impetuose quantitate proportionatâ ad irritationem." In hoc et in aliis morbis stomachus, hepar, et omne aliud organum corporis videtur suum proprium officium negligere ut opem conferat ad morbum depellendum.

Cor quoque simile modo augmentare videtur suam actionem ad opitulandum viribus animi, ut possit superare aut comprehendere naturam irritamenti. Cum suum propositum nequibat assequi, eo certior fit de suis defectibus. Equidem non est dubium quin magni sit momenti, apprime intelligere statum pulsus; nam in hoc, videor mihi videre exemplar, in quo Natura conatur resarcire inguriam corpori factam, cui ne obstas propriis remediis acrior evenit ac denique ad mortem perducit. Finis.

Benja. Warren Stewart.

Maryland.

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An

Inaugural Dissertation

On

Syphilis

For the degree of

Doctor of Medicine

Addressed to the

Medical Faculty, Provost

and Trustees

of the

University of Maryland.

By Wm. S. Biggs

It is not essential to our purpose to enquire whether this disease was known to the Ancients, or is one of comparatively modern origin. It is now sufficiently ascertained, that it is one of too common occurrence in this as well as many other countries; and also that it is one for which no definite treatment has been laid down. The origin of Syphilis, however, cannot be ascribed to any country or class of people. It is thought by some to have been introduced into Europe from America, about the termination of the 14th Century; yet others of equal authority deny its appearance prior to the close of the fifteenth. Notwithstanding inquiries into the first appearance of this disease are certainly vastly interesting, and not altogether useless, yet an essay of this nature will not admit of an extended discussion on this point, as it is intended for more practical details. With this impression, therefore, I shall endeavour to describe the symptoms of syphilis, commencing with Chancre.—

The true syphilitic chancre, generally makes its appearance with a slight discoloration or inflam-

-ation of the part of the genital organs which it attacks, sometimes attended with considerable itching which induces a person to believe that he is doomed to suffer its pernicious consequences. Some pain is soon experienced, and in a short time a small tumour presents itself, filled with a morbid pus, which when it breaks leaves a round ulcer deeply hollowed out, with edges hard and almost insensible to the application of caustic, and often smeared with a thick tenacious and ash-coloured matter. The induration and thickening are generally confined to the edges and base of the ulcer, while the surrounding parts preserve their natural softness and elasticity common to that tissue. When a chancre is observed on the internal coat of the prepuce or on the frænum, there is generally more inflamation attending it, than when on the glans penis, the pain is also more intolerable, and instead of a regular genuine looking chancre, we observe nothing more apparently than a slight abrasion or loss of skin. One peculiarity connected with chancres situated

on the common or external skin, not observed in chancres attacking the glans penis or prepuce, is, that the pus, which is discharged from the chancre soon becomes dry and forms a cicatrix, which is in a day or two succeeded by another, formed of the same materials. They very often originate from cracks on the prepuce, which frequently take place from too great an excitement during the act of coition. Chancres generally have some characteristic marks by which they may be seperated from common ulcers, the sides of which are generally smooth - while those of the genuine primary syphilitic ulcer are rough with a base firm & indurated. The degree of inflamation which attends these different forms of chancre, varies very much, at one time it is very mild, scarcely causing any uneasiness; but at others, it attains such a height as to cause considerable sloughing of the penis. Whether the extent of the inflamation, is dependant upon the irritable state of the constitution of the patient, or upon the virulency of the venereal virus; I am not prepared to decide, yet I am rather

inclined to uphold the first proposition. Chancres may be found on any portion of the surface of the body, but more frequently on mucous membranes, which they lay hold of in preference to the common skin. When they attack the penis which is generally the case, they are to be found on the side of the frenum, in the entrance of the urethra, back of the corona glandis, or on the internal membrane of the prepuce. — In women, chancres are usually met with on the nymphæ labia, & sometimes though rarely in the vagina. Sometimes we find very large chancres situated on the perineum and adjacent parts. I well remember when attending the clinical Lectures at the Alms House in Philadelphia, my attention was directed to one of the Paupers who had several chancres on the external part of the labia, and one which occupied the greater portion of the perineum. Surgeons should be very careful in handling such ulcers when their fingers are any ways wounded, for it is a fact well known and supported by the best authority, that the matter discharged from a chancre

is capable of producing all the different stages of the disease. The time that elapses between the application of the venereal virus and the appearance of a chancre is not or cannot to a certainty be settled. At some times they may be observed to arise in the space of twelve hours (as I have witnessed) after an impure coition; whereas in many others, they may not make their appearance until the lapse of the same number of days; and indeed not unfrequently for some months. Having thus given as concise a description of the syphilitic chancre as we were capable, we shall next proceed to consider the method of cure.—

It would be almost impossible after reading the different treatises on syphilis, to arrive at any satisfactory conclusion, as to the most successful mode of treating both the local and constitutional symptoms.— Some authors contend, that in genuine syphilis, mercury in some form or other is indispensable to the complete eradication of the disease; while others condemn all the preparations of that mineral, alledging that the effects produced by them are worse than the

disease itself. Others, again who are not so prejudiced in the administration of mercury, hold, that it may be both safely & beneficially prescribed in all cases of syphilis. Mr Hennan remarks; "In every primary ulcer I would give up the idea of using mercury at first, treating it as if it were a simple ulceration, by cleanliness, rest, and abstinence, and applying to it the most simple and mildest dressings. If the sore did not put on a healing appearance in a reasonable time, the extent of which must depend on the circumstances of the patient, I should make use of more active dressings. But if, beyond all calculation, it remained open, I should certainly not sacrifice every consideration to a dislike of mercury, knowing how many persons have been seriously benefitted by a judicious and mild administration of that remedy."

The above remarks, in a measure, accord with my own views as to the treatment, with this exception only, that, in order to cure the disease permanently and expeditiously we should rely more upon the use of Mercurials.— The only objection we have to the indiscriminate use

of Mercury in this disease, is, that we are not always capa-
-ble of judging to what extent it may be safely
carried. We are well aware that the treatment of this dise-
-ase, has been attempted by many Medical gentlemen
without the employment of Mercury, and apparently
with some success, yet not such as would as would
persuade us to abandon a remedy which for many years
has been demonstrated to possess undoubted curative
powers, and which I have the greatest reliance in when
properly administered. In the treatment of chancre, topical
applications will often be found sufficient to curtail
the future progress of the disease. We would then on all
occasions, when a chancre is of recent date, destroy it
with the common Lunar Caustic or Nitras Argenti, provi-
-ded the inflamation was not too extensive, in which
case nothing could be more appropriate than common
emollient dressings enveloping the whole penis, as a
preparatory step to more stimulating applications.—
But where the chancre has existed for some weeks, we
would change our plan of treatment, ordering the patie-
-nt to attend strictly & particularly to cleanliness, to

apply dressings spread with simple cerate, and at the same time to take alterative doses of Mercury. When an impression has been made on the system by these means, we would then pare away the hardened edges of the chancre by the frequent application of caustic, and order it to be dressed with some stimulating ointment; or to be washed several times in the day with the "Black Wash, which is made by putting Submuriatis Hydrarg ℥ij to an aqua Calcis ℥j. Of the Internal remedies, the Submurias Hydrarg, and Pilula Hydrarg appear to me to be most generally ordered. The Calomel may be taken in one grain doses twice or three times a day, or in combination with some Opiates, until it produces the desired effect; The Blue pill may be given in the dose of five grains twice or three times a day also, which is very mild and pleasant in its operation. The system should be kept under the influence of the medicine for some weeks; but it is of primary importance that the patient should avoid the vicissitudes of temperature as also an irritating diet, and abstain

from all kinds of stimulating potations. If Phymosis or Paraphimosis should supervene, they should be treated by the strictest antiphlogistic means until all inflamatory symptoms have been subdued.— When these means prove abortive and the Phymosis is of long standing and appears to be dependant on an ulcerated state of the glans penis, it will then become necessary to perform the common operation of slitting the prepuce in order to alleviate the sufferings of the patient.— If on the other hand, Paraphymosis should supervene, the patient should be relieved as soon as possible as very unpleasant consequences may ensue from a continuance of the stricture. If it be of recent occurrence, and there is not much pain or tumefaction accompaning it may be reduced by grasping the glans penis and making gradual and firm pressure at the same time pressing it backwards. Should these means together with a most active antiphlogistic treatment fail, it will then become necessary to divide the stricture. —

Buboes. These tumours are often extremely troublesome; and in scrofulous and irritable subjects, or from an improper use of Mercury, often cause the most alarming and ungovernable ulcerations, which now and then sweep away the integuments of both groins. Buboes may arise from several causes, either from irritation produced by sympathy, or from absorption of the venereal virus. The former is very often observed in virulent gonorrhœa; or may arise from injuries of the inferior extremities, cold and other causes, while the latter or true syphilitic bubo generally follows chancre, which is caused by the matter, in its course through the inguinal glands, exciting inflamation and thereby enlargement of them and finally suppuration and ulceration. It is supposed by some surgeons that Buboes often originate from the accidental lodgement of the venereal poison on the unbroken skin. - notwithstanding this opinion, true syphilitic buboes generally, though not invariably succeed chancres seated on the prepuce or frænum in preference to those on the glans penis as has been observed by the

illustrious Hunter." A bubo does not invariably follow a chancre, and yet the system is not less liable in such cases to contamination. This circumstance amongst others, has induced some surgeons to believe that bubo does not arise, as is commonly imagined, from the absorption of venereal virus, but from the inflamation in the extremities of the lymphatics excited by the chancre. Such an idea appears not improbable, and yet it must be recollected that the matter of bubo is infectious, which could hardly happen from simple irritation excited by inflamation. Why the glands, however, contiguous to the sore should suffer while the distant ones escape, is not easily explained; for, upon the supposition of the virus being absorbed, it should follow that, by passing through the whole, all should be equally liable to disease." The venereal poison always attacks those glands in the immediate vicinity of the chancre and according to Mr Hunter's observations only one gland is commonly affected, although several are sometimes implicated. The symptoms of a syphilitic bubo

are commonly a sensation of pain or uneasiness about the centre of the inguinal region, succeeded by a small tumour, which is extremely painful to the patient to be handled, and which, if not arrested by proper means, will quickly terminate in suppuration & even ulceration. The colour of the skin is also very often changed, assuming a darkish cadaverous appearance, instead of a deep scarlet colour which is so characteristick a sign. We sometimes however, meet with buboes of such an indolent nature, that they evince no disposition to resolution or suppuration in spite of the most active measures that can be employed. Mr Hunter thought, that in such cases, the inflammatory process is retarded, either by a too liberal employment of Mercury or a scrofulous diathesis.- At other times, very extensive ulcerations are produced by a bubo, particularly in persons having a tendency to scrofula. I had an opportunity of seeing at the Alms House within the last year the whole extent of one groin entirely eaten away by ulceration - which baffled all the skill of the attending Physician -

This patient evidently labored under a scrofulous taint, which in a great measure was the cause of the obstinacy of the disease. The treatment of this particular stage of the disease may be summed up in a very few words. When we are called to a patient when the inflammatory action is not very extensive and the symptoms of suppuration are absent, we would make use of all the means in our power to discuss the tumour as soon as possible, fearing the almost inevitable consequence, suppuration, if left to pursue its own course. In order to accomplish this end, we would make use of the most vigorous antiphlogistic treatment. When the general health of the patient is good, and he is of a robust and plethoric habit, bloodletting, both general and local may be advantageously employed - nauseating doses of Tartrate of Antimony and Potash, saline cathartics, simple and almost absolute diet, the horizontal position, together with cold applications to the part, frequently changed, and Iodine ointment rubbed on the swelling once or twice a day - With regard to the efficacy of the Iodine ointment, there is some diversity of opinion, some consider it an invaluable application in resolving

such tumours, while others think it is of too irritating a character, and never make use of it. From the number of cases which were in the Infirmary during my pupilage there, in most of which this ointment entered as a part of the treatment, I am induced to hold it in high estimation combined with other judicious means. We are well aware that the Preparation of Iodine exert sometimes powerful absorbefacients effects in some diseases, and are at a loss why it is not admissable in this particular affection; certainly, it is not very irritating, but even admitting that it is, is not a sufficient reason why we should not make use of it, for certainly we can make it of any strength, to adapt all cases. Should an erysipelatous inflammation, however, supervene, it must be combated by the usual antiphlogistic measures and decided bloodlettings, if the habit of the patient be robust, which have been found very beneficial in preventing suppuration. One of the best means in arresting the farther progress of the erysipelatous condition, is, to encircle it, by applying the pure Nitrate of Silver on the skin and thereby confining it to one part. I have seen the application of this article often succeed

in putting immediate stop to erysipelatous inflammations when all other means appeared to be inadequate.- These measures will often bring about resolution without other means; but in some constitutions it appears that this cannot be accomplished without a regular course of mercury.- In other constitutions, however, particularly those inclined to be irritable and scrofulous, it will often instead of discussing the tumour, hasten on suppuration and thereby extensive ulceration. The application of a blister to a bubo in its first stage, has also been found very serviceable; I have seen many instances in which they had decided good effect, but where the general habit of the patient is robust and of an inflammatory disposition, it is always advisable to abstract blood and make use of other antiphlogistic measures. Should these means prove insufficient to discuss the tumour, and suppuration threaten, we should then apply warm emollient poultices to the groin with a view of promoting this action until all the matter is discharged.- Sometimes buboes are of such an indolent and obstinate character as to show neither disposition to resolution or a

tendency to suppuration. In such cases, McCarmichael says, the greatest advantage may be derived from the repeated application of blisters to the indurated bubo, which soon bring about either the dispersion or suppuration of the tumour. Some Surgeons say that suppurating buboes should never be opened, but I cannot subscribe to that opinion as I have seen many vastly benefitted by the application of the lancet. The caustic may be used for the same purpose, but is attended with more pain and a greater degree of irritation which in a great measure limit its application. The use of cupes has very happy effects in some cases. We had occasion frequently while in the Infirmary to apply cupes to such suppurating tumours and witnessed the most happy results. When the tumour has been laid open with the lancet, it will generally heal under the application of emollient poultices and simple dressings frequently changed. But, sometimes, the ulceration, which often follows buboes, is of such an indolent & obstinate a character as to defy almost all the measures we can employ in attempting to produce healthy granulations. We have seen the black mercurial

wash much used in this species of buboes, arresting the ulcerative process, and producing in a great measure a favourable appearance of the wound. Should the edges become hard and projecting, they may be removed with the scalpel or destroyed by frequent application of the common lunar caustic. In such cases, says McCarmichael, "caustic, however, powerful, is so slow in its operation upon the extensive and undermined edges of the buboes, that I always make use of the scalpel for their removal; and this treatment has caused many of them to heal in five or six weeks, which would have resisted any other mode of practice as many months." When we meet with such ulcers it is always necessary in the first instance to pare off the edges; "& if these edges are not removed by art, the ulcer will remain for months, and perhaps years, without healing."

Secondary symptoms of Syphilis. These symptoms generally make their appearance under various forms, not confining themselves, however, always to any fixed or regular order. The parts

which become diseased first, owing to the diffusion of the venereal virus, are the throat, nose, inside of the mouth, sometimes the tongue, and skin. Those that are affected in the second instance, consist of the periosteum, fascia, bones and ligaments. It is asserted by some writers, that the skin is the texture always first affected; but judging from the cases we had in the infirmary during the past year we are not disposed to think so, for an ulceration of the tonsils was invariably the first evidence of the disease. The skin may be affected, however, without any previous sore throat (at least unknown to the patients) as we have observed in some few cases.— Impressed with this belief, we will, in the first instance, speak of the venereal sore throat. The tonsils are generally the parts first affected, in the form of ulceration; one or both tonsils may be involved in the disease according to circumstances. If in this stage of the disease, the ulceration is allowed to progress, either from a want of timely medical aid or from neglect, the uvula, velum palati and the

whole internal side of the throat and mouth may be completely destroyed - producing thereby great deformity and suffering - A communication is frequently formed between the nose and mouth, which is produced by an ulceration of the soft parts and bones of the palate. In many instances, the ulceration proceeds along the Schneidarian membrane, destroying the septum and cartilaginous portion of the nose as also the small bones which soon become carious and fall away in small pieces, leaving the patient very much deformed, with a sunken and depressed nose. The ulceration attending the venereal sore throat is not preceded by so much inflammation, pain or swelling as in common inflammations of the tonsils, and the ulcers present all the peculiarities, similar to those of the true syphilitic chancre affecting the glans penis. The thickened and indurated edges which are so characteristic of the true Hunterian ulcer always accompany this affection. Surgeons are very apt to overlook this disease, owing to the slightness of the pain which

generally attends it. In looking into the mouth of a person labouring under this malady, the ulcer will be seen covered with an ash coloured or whitish viscid matter not peculiar in common ulcerations of the tonsils. Mr Hunter represents the true syphilitic ulcer as a "fair loss of substance, the part being, as it were, dug out of the body of the tonsil." The remedial measures will be considered after describing the two other forms of secondary symptoms. We will now speak of the Venereal Eruptions — These, always show themselves on the skin under various modifications, which circumstance obliges Surgeons to be very careful & prudent in forming their diagnosis. In general the whole skin becomes mottled, or covered by an efflorescence, which is frequently attended or preceded by general indisposition — such as slight febrile excitement, accompanied with headach, and pains in the different joints, and restlessness. Sometimes, however, distinct patches appear, dispersed over different parts of the body, on which is formed a thick scale or scurf; which is soon thrown off, and a new one of

the same character is regenerated. Every succeeding scale becomes thicker and thicker, till at last an ulcer is formed which discharges an acrid fœtid matter. These ulcers seldom exceed the size of a sixpence.- When parts are attacked with these venereal patches that are opposed by another skin- as between the scrotum and thighs- in the axilla- between the nates &c they do not present the usual dry and scaly appearance, common to those situated on other parts; but exhibit a moist and raw surface, from which a thin matter is continually discharging. The true syphilitic eruption makes its appearance almost in every instance on the head, back of the neck, forehead and on the inguinal region. The palms of the hands and soles of the feet are also occasionally attacked, but its appearance is quite different from that on other parts of the body. As soon as the cuticle is thrown off, it is succeeded by another; and this may take place several times without the parts evincing any disposition to form a scurf. The extremities of the fingers and toes are frequently affected; in which case the

surface under the nail soon becomes inflamed and tender, and a seperation of the nail thereby follows, similar to that of the cuticle in the eruption of the skin; but not observing the regular regeneration of nails, as of cuticle. Syphilitic nodes. The periosteum, bones, ligaments, & fascia, are the deep seated parts most subject to be attacked by the absorption of the venereal poison, after the primary constitutional symptoms have appeared, and allowed to progress without making use of some mercurial preparation. All the bones do not evince the same susceptibility of becoming contaminated by the poison. The superficial bones are more liable to be affected than the more deep seated; such as, the bones of the cranium, tibia, sternum, clavicle, & both radius and ulna. The first evidence of the disease having extended to the bones, is an enlargement or properly styled a node, which is generally very gradual in its progress, and not attended with much pain in the commencement. A distinguished writer gives the following definition of a syphilitic node.— "The true syphilitic node is a solid enlargement

of the bone, and is not at its commencement, nor for a considerable period afterwards, accompanied by any discoloration of the integuments. It is, in most, a very indolent swelling, increasing by slow degrees, and exciting but little pain and inflammation, until in an advanced state. But it does not retain these characters long; for the tumour soon becomes extremely discoloured and inflamed, deep-seated and sharp pain is experienced throughout the whole extent of the limb, principally at night. At length, however, the tumour instead of retaining its solid and firm character, is changed into a soft and fluctuating swelling that indicates the formation of matter within its cavity. When it arrives at this stage, it frequently opens spontaneously, discharging a thick viscid matter. The surface of the bone is often exposed from the extent of the ulcerative process, presenting its natural cancellated appearance, but deprived of its periosteum. Some surgeons are very apt to pronounce all swellings over the region of a bone, syphilitic bodes, before making any examination or enquiries, and treat them accordingly; satisfied

that they originate from a syphilitic taint.— Now, there is such a disparity between both the treatment and symptoms of these different kinds of tumours as to induce Surgeons to pause a little and examine before pronouncing their diagnosis.— The periosteum, and soft parts in the immediate vicinity, enveloping the bone, are very subject to attacks of inflammation; produced by cold and other causes. This affection is denominated "Periostitis" by Authors. A true syphilitic node, on the contrary, cannot be produced by any other cause than the absorption of the venereal. The swelling attending periostitis arises very suddenly and after continuing a few days as rapidly disappears without the use of mercury. The pain also in this affection is almost insufferable, while, on the other hand, patients affected with a syphilitic node experience very little particularly in the first stage. Syphilitic nodes on the contrary are attended with a swelling which in the first instance evinces neither disposition to be discussed or to suppurate. Again! the seat of these two diseases is well marked; In periostitis, the periosteum is affected as also the adjoining cellular tissue,

while in a syphilitic node the substance of the is principally implicated. If the diagnosis just drawn between these two diseases be allowed to be correct there can certainly be no difficulty in discriminating them.

Treatment of Secondary Symptoms. The treatment of this variety of syphilis must differ in a great measure according to the extent of the disease. It has become quite common of late years with some practitioners, to follow the non-mercurial plan of treatment, renouncing all the preparations of Mercury in every stage of the disease. This mode of treatment has been practised to some extent by the British military surgeons with some success; admitting their statements to be correct. A similar practice has also been instituted by American physicians, and with similar results. The non-mercurial practice has been extensively tried in the Navy Hospital at Philadelphia by Dr Harris, surgeon in the U. S. Navy. For nearly six years he has discarded every preparation of mercury from his practice, and asserts that he has ever since found all the forms of syphilis more tractable, and what is of the utmost importance, entirely exempt from secondary symptoms.

The authority of Dr Harris is too respectable, to admit of any doubt of the correctness or validity of his assertions otherwise we would be inclined to discredit them. That Syphilis can be cured by the non-mercurial practice, is a fact, which has been undoubtedly confirmed in two cases that fell under our notice, but that it will succeed in all cases we are not prepared to allow. The cure of this disease is undoubtedly in all its stages expedited by the employment of mercury, & and the patient is less liable to after attacks, when it has been judiciously managed. But at the same time we must bear in mind that it is not admissable in all states of the constitution, the presence of a Phagedenic ulcer should always forbid its exhibition, as it has been ascertained beyond a doubt that it is injurious in such cases. We will now after having made these remarks give our treatment of the different secondary symptoms individually. General Sore Throat. As this symptome has been classed in this essay among the first of the secondary symptoms, it should likewise be treated first. The treatment of this affection

is generally very simple and easily managed. The ulcerations of the throat which generally attend this disease have been already described, and require, however, immediate attention, lest the patient should suffer the loss of parts which, perhaps, in their destruction might involve life itself. If the ulceration has not extended far, presenting only a whitish or ash-coloured surface, either of the following local applications may be used every other day, or as often as may be required, by means of a large hair pencil, viz- a solution of the Nitrate of Silver in the proportion of from four to eight grains to an ounce of water, or a solution of the muriate of Mercury or corrosive sublimate, the application of which has been found very effectual in the proportion of from two to four grains to an ounce of water. The state of the stomach should always be attended to, by regulating the diet, and the use of mild laxatives. It would be also proper and advisable, that the patient should at the same time take some internal medicine, for which purpose nothing answers better than a solution of the Bichloride in the proportion of $\frac{1}{16}$ of a grain three times a day. This preparation

has been found to excel all others especially in the advanced stages of the disease. The Blue pill or Submurias Hydrargyri also may be given either alone or combined with Opium when we wish to make an early impression on the system. But if the ulceration has become extensive, involving the whole extent of the fauces, and destroying the adjacent parts, we should then immediately have recourse to fumigations of the Red Sulphuret of Mercury employed frequently through the day in combination with internal remedies. Eruptions. This form of secondary symptoms should be treated upon general principles, as fully detailed in the foregoing pages. Besides mercurial preparations, there are others which have acquired great reputation in the treatment of the latter stages of syphilis. The mineral acids have been extensively used, particularly the Nitro muriatic, which has been found very effectual. The decoctions of the woods such as Sarsaparilla, Guiacum and Mezereon have been much employed of late years, especially by those who advocate the non-mercurial plan of treatment. These in our opinion will seldom succeed, but much may be gained by combining them with mercurial preparations. Bodes-

These tumours are sometimes of very long duration, and resist all applications. The frequent application of leeches, in conjunction with some discutient application, in the early stages, will be found to afford great service, particularly if there is much inflammation surrounding the tumour. Blisters are also much used with a view of discussing these tumours, and with decided benefit. The internal use of Arsenic has been much recommended, and many cases are related successfully treated by it. Sometimes, in spite of all our remedies, the bone becomes so much implicated as to require an operation.

1837

An
Inaugural Dissertation
on
Carcinoma
For the degree of
Doctor of Medicine
addressed to the
Medical Faculty
Provost, and Trustees
of the
University of Maryland.
By R. J. Pearce

By an inevitable law of nature we are all doomed to suffer and to die pain pleasure and disease are allotted to all sensible beings - Nature in the formation and regularity of the vital functions has done every thing to preserve health but disease is one of the necessary results of the animal Economy, occasioned by necessitudes in the midst of which we have been placed

Man of all others the most noble - with faculties the most elevated - enjoying in the highest degree those constitutes from which result the causes that expose him to many noxious and destructive complaints

Nothing endowed with life can be placed beyond the reach of physical suffering --- and man from his constitution and habits is the

most susceptible to morbid agents

But though such are the mortal consequences imposed upon us by the laws of Nature she has at the same time instilled into us the desire to prolong life — and has made us capable to the selection and application of such remedies as will alleviate our sufferings

Instinct leads the brute creation to such ailments as are suitable to their wants — Man possessing so far wider and greater resources — endowed with intellect — with a power of discrimination. wholly his own, is still ignorant of the means which lead to a perfect developement of the nature and cause a phenomenon of some of our most fatal diseases.

Among these I must mention

— Carcinoma —

Cancer has for ages past claimed the investigation of the most eminent physicians both with regard to its nature and its cure —

There is scarcely any part of the human body that is exempt from the attacks of this disease —— But it has been ascertained from reiterated observation that the glandular structures are by far the most liable

The parts most subject to it, are the breasts of women the mouth tongue mouth lips nose face - the testes penis. prostate gland. pylorus liver &c. But the breast of women are the most liable to the disease

I may also here notice that it is most commonly met with in adults ——

The word cancer is derived from its supposed resemblance to the Crab

In speaking of Carcinoma I shall divide it into Scirrhus or occult and Open or Ulcerated

Of the Scirrhus or Occult

In its early stage the Scirrhus Tumor is hard, for the most part round but sometimes ~~irregular~~ in its configuration —

Its increase is slow unless exposed to some irritating cause

Mr. Abernethy thinks that unlike other carcomatous tumors. Cancer can not be made to recede — although its progress may for a time be arrested — he qualifies this observation however by saying afterwards, "that he has since been informed by some

respectable surgeons that the real carcinomatous tumor has been made to recede by a peculiar local treatment"

As the tumor enlarges it usually presents a more unequal surface and indeed this inequality has been considered by some a characteristic of the disease

It's hard to find however a criterion for the tumor being cancerous the ensemble generally given, an a lancinating pain — yet this attends other tumors — and in fact in the true cancroma this pain is sometimes wanting — though we must acknowledge this is decidedly the case —

The pain when it does present is described as "of a peculiar kind of lancinating thrill — of darting shootings — or in the absence of these of a constant knawing or burning

of burning heat applied over it — or of a prickling like the thrust of needles."

As the tumor advances it assumes a more incompressible hardness - and the surrounding subcutaneous vessels become varicose — Mr Cooper says that the most infallible evidence of a cancerous tumor is its incompressibility

We know there that the disease always excites the contiguous parts to the same diseased action

This Mr. Abernethy makes one of his distinguishing marks.

But is it not probable that no definite diagnostic sign exists to identify the early stage of a cancerous tumor — for it is I believe acknowledged by all that any tumor may become such a

When the skin covering a concealed tumour is about to ulcerate it first assumes a dark purple colour changing at times almost to black. – It at last bursts – discharging a thick pulpy matter usually, sometimes an acid excoriating ichor exudes. This then constitutes the

Open or Ulcerated Cancer

In this there is always a sense of ardent pain – it is of an unequal ragged surface – discharging a sanious and very fœtid matter the edges of the sore are raised hard and painful – inverted or everted presenting a lunated appearance – among the sets of tumours – this said the discharge often assumes the character of pus adhering – closely to these edges. Frequently in the progress

of a concurrent ulcer, we have Hæmorrhages occurring in consequence of the erosion of blood vessels —

This disease sometimes advances rapidly attended with considerable inflammation, but more generally by a gradual progression it crosses the adjacent parts without our perceiving much constitutional derangement —

It often affects contiguous glands through the medium of the absorbents During its progress the exudation acquires a peculiar and intolerable stench The patient now soon sinks under the incessant pain and irritation — and not unfrequently terminates a miserable life without ever having received the least mitigation to his sufferings during the whole of its terrible course —

There is often says Mr Cooper attending Carcinoma a fragility of the bones — {Fragilitas Ossium} so that those of the limbs are often broken by merely turning in bed

With regard to the Causes —
One of the oldest opinions was that Cancer was produced from the presence of worms, "which distroyed the parts and produced all the local mischief" Even Dr Adams — and I believe also Mr Carmichael — has attributed it to Hydatids when they found their way into a solid substance
This absurd theory is now however entirely relinquished
It was also supposed by some that the matter was absorbed into the blood but all modern writers confine its absorption solely to the Lymphatic system — — By some again to

a want of healthy nutrition only — from the effects of blows — pressure &c —
But Sir Astley Cooper remarks that "it is always preceded by a state of the constitution which has excited it — for a blow or bruise on a healthy person, would be followed by common inflammation only — but when the system was predisposed to the formation of scrofulous tubercle, it would excite a peculiar action in the part which might lay the foundation for the disease" Sir A Cooper sums up by saying that "it is the effect of a specific action in the part preceded by a disposition in the constitution to its production" — This is probably as good a definition as could be given

It has been said by many to be hereditary — The supposition of

the regular catamenial discharge has been laid down by authors as one of the most frequent exciting causes certain it is that women are most liable to it at that period of life when that discharge ceases — suppression of long continued Da= morrhoids another —

Sudden and violent emotions of the mind have been accused of pro= ducing it. It has been said to be depending much on a low debilitated and cachectic habit of body — how far this holds good I am unprepared to say - but certainly my limited experience and observation would have led me to a different conclusion - a luxurious habit of life an immoderate use of ardent spirits - &c &c. have been assigned as its cause — —

But the truth is we know little or nothing of its peculiar Nature — That a predisposition to it exists in certain individuals is allowed by all — We find it in totally different habits, in different constitutions in the robust and plethoric — in the ~~cachectic~~ emaciated Cachectic — We find it in ~~the~~ those indulging in the most effeminate luxuries — we find it in the sober hard working man We see it in the fearful & timid voluptuary of the town — we see it in the temperate & frugal farmer — in Cities in Countries — in all climes in all places — it amounts then to this — as I said before we know nothing in fact of its cause or of its cure — We merely know that it is a peculiar virus — located in the part — accumulating — gradually despite our utmost efforts

Of the Anatomical Structure little can be said, it may be said to present a surface raw and unequal, most usually with raised indurated edges — not inaptly likened by the Late Professor Donald to — "an Irish Potatoe when cut"

I might here remark that Sir A Cooper has said — "the true Cancinomatous tubercle seldom attains any considerable size" he also says many Scirrhi are attended even with a shrunken state of the ~~part~~ —

From the centre of the Ulcer are seen to proceed, small firm white bands towards its circumference these are crossed at right angles by others, forming a reticulated arrangement over its whole surface these led Dr. Adams to suppose

the disease originated in the adipose tissue and that these bands were nothing more than - condensed cellular membrane — It is very necessary in the extirpation of a cancerous tumour that we should obtain from these bands cut through whether we have left any of the disease behind —

In speaking of the Cure of cancer I might say — "the Knife alone is a medical" — I cannot I must confess believe in the many recorded cases of cures effected by medicinal agents how often has the sarcomatous tumour been taken for the cancerous? how often has the former been extirpated for the latter? - for the most enumerate cutters have all acknowledged the extreme difficulty in some cases

is distinguishing between these two diseases —

I can now only notice in succession the different applications that have been supposed to exert a beneficial influence upon a cancerand tumor — In palliating the suffering of our patients, we can only administer anodynes internally, or apply them to the part —

It would be an almost endless task to enumerate the many Specifics that have been used in this Disease and we shall here merely name some of those from which we may hope to obtain for our patients some temporary advantage

The carrot poultice
Braised Hemlock leaves
Powdered Charcoal

Extract of Belladonna – plaster –
Pulverized opium
Tar water
Carbonic acid gas
Arsenic – in a paste usually made by adding about ten parts of flour or starch – and it may be here noticed that arsenic acts more readily on diseased parts than living –
The different preparations of Mercury have also been used locally – &
But I intimate there is no specific so far as we know –
Internally there has been used nearly all of the narcotics – Cicuta Hyoscyamus, Belladonna – also Iodine the different preparations of Iron & Mercury – &c &c – – – But none of these have ever effected a cure –
the Knife and the Knife alone is the cure –

I shall now notice the principal indications for the extirpation of Cancer —— first then the tumor should be so situated that we may not wound any large blood vessels or nerves —

When the whole of the morbid part can certainly be removed —

When the general constitution of the patient is otherwise good —

When adjacent glands and absorbent vessels are not involved in the disease

The mode of operating must of course be different in different cases or according to the location of the tumor — But there are several general rules that may be laid down to guide the operator — The first and most important is — invariably to take away part of the surrounding

healthy tissue —
again, to cut in the direction of the muscular fibre - if possible -
To have as much sound skin as will neatly cover the wound, this thing can only be done when the tumor is not ulcerated —
We should preserve the parts in ~~a healthy~~ an easy & steady position for several days before they are looked at or opened —
We should use but mild and cooling applications during the cure —

In concluding this little Thesis I hope I may be permitted to thank my Tutors - for their unremitted exertions in teaching me the principals of that science to which I have devoted myself and also for the many pleasant hours I have spent in social intercourse with them —

~~1812~~

1837

An
Inaugural Dissertation
on
The Chemical Properties & medical uses
of Iodine,
for the
Diseases of Poultry of Middlesex
Addressed to the
Trustees and Faculty
of the
University of Hampden Sydney
by
Mark C. Cullaway
of
Nelson County Virginia

An
Inaugural Dissertation
on

The Chemical Properies & medical uses of Iodine.

for the
Degree of Doctor of Medecine

addressed to the

Trustees and Faculty
of the
University of Maryland

by
Paul C Callaway.
of

Nelson County Virginia

Iodine was discovered by M Courtois of Paris in 1812. its real nature was subsequently determined by Gay Lussac & Sir H Davy ie. - "that it was a simple non metallic substance analogous to Chlorine" In a simple form - Iodine occurs as a soft dark coloured substance & in Chistaline scales resembling those of Iron. - It is an electro Negative, has an acid taste, - insoluble in water - but easily dissolved in Alcohol & Ether - when a high degree of heat is applied - beautiful violet vapour is given off. - Iodine has also an extensive range of affinities - uniting with oxygen Hydrogen & Chlorine it forms acids. these in turn uniting with - the alkalies & pure metals form - ~~from~~ an extensive class of highly useful compounds. -

Iodine was first obtained from the Kelp of sea weeds & this is the source from which much is now obtained but it exists - also - in the sponge, Oyster &c. of the animal kingdom, it has been found also in the mineral - as one of the Constituents of Muriate of Soda - & Dr Steel in his analyses of the Saratoga waters - discovered the Hydriodate of soda - in the proportions of 3 gr. to the gallon of water - he was induced to make this analysis from the happy results of these waters on "Strumous habits" In the vegetable kingdom first alluded to it exists more properly as the Hydriodate of Potassa -

Helium was discovered by Professor of Paris in 1868. It was
hidden was subsequently later proved by Sir Joseph John Thomson
in. "that it was a simple gas, indicates distinctness as a element
to Electrons." It is a simple gas. Helium is a very
rare element. It is found in the atmosphere in very minute
traces of Ne. — It is an electric lamp, has an atomic
weight. — Insoluble in water — but soluble alcohol or ether
& ether. When a high degree of heat is applied. Insoluble
liquid. Helium is opaque. — Helium has also an extra
[illegible] of [illegible] — Helium with oxygen [illegible]
[illegible] Helium is found combining with. The [illegible]
[illegible] Helium gas. [illegible] an extraordinary [illegible] of [illegible]
[illegible].

Helium was finally extracted from the [illegible] of [illegible]
[illegible] this is the source from which most is obtained
[illegible] it exists also. in the atmosphere. [illegible] the [illegible]
[illegible], it has been found also in the [illegible] as
of the [illegible] of [illegible] of [illegible]. [illegible]
in the [illegible] of the [illegible] [illegible]. [illegible]
the [illegible] of [illegible]. in the [illegible] of [illegible]
[illegible] of [illegible]. It was [illegible] to make this one
from the [illegible] results of these [illegible] or "[illegible]"
[illegible] the [illegible] [illegible] first [illegible] to it [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]

Iodine is prepared from Kelp - (the ashes of sea weeds) which is the chief article used by the following process - Make a concentrated solution of the kelp in distilled water - the carbonate of soda & muriate of sodium - are christalized & precipitated to the bottom of the vessel. then add sulph^c acid - & per oxide of manganese to the remaining solution - which contains the Hydriodate of potash & the action now produced may be understood by the following formula -

Hydriod: of Potapa. — Sulph^c acid. — Perox: Manganese

Hydriodic acid + Potapa

Hyd + Iodine - free — Sulphates of Potapa.

- Hydrogen unity with portion of oxygen. forming water - leaving Protox: of Manganese - the same formula may apply in obtaining it from any other substance containing Iodine - it generally occurs in the form of a salt, of Potapium or of Sodium - This concise & I hope imperfect view of our subject chemically considered - I have introduced ~~it~~ not only as ~~[illegible]~~ being necessary to a complete view of the subject but as having an essential bearing upon - the subsequent part of our remarks. -

The difficult solubility of Iodine constitutes an insuperable objection to its being administered in a solid form - for it would not only not fulfil the object of its employment ~~but~~ in this state incapable of being absorbed, it would prove directly hurtful ~~upon~~ to those surfaces with which it comes in contact - these considerations have lead to various Pharmaceutical preparations -

Adding is performed from left. (the order of addends) which is the

Table of addition and the following method. Make a column

- labeled addition of left in the labelled order. The remainder

should remain after this column. The column belonging to the

bottom of the column. The column labelled 1 is the right hand

to the remaining addition - which continue the other addends of the first

column & the addition from the column labelled 10 in the

following formula -

Hydrochloric acid + Potash

Hydrochloric acid + Potash

Hydr + Chlorine - Water

Solute iron. Potash. Hydrogen.

Sulphuric acid of Potash

- Hydrogen unites with two

of oxygen forming water - Leaves Potash: of the oxygen combined

- the iron formula may explain in efficiency of iron using other

substances combining - If generally regards in the form of

a table of Potassium or of chlorine - this increase & iron employed

then of our budget chemistry consider. Hence in the case of

not only or necessary using necessary to a complete view of the subject

but or knowing an elementary knowing upon. The subsequent results

are useful -

The difficult labouring of chemical combination are complicated

regards to the learning a chemical idea in a table form - for it

unites not only not only the object of the employment

in this article increasing of learning substances. It would have

already included [illegible] time another with which it cooperates in

combined. This combination leads to the work

which we experience [illegible] -

though insoluble in water - Iodine may be easily dissolved in alcohol or ether. the ~~preparation~~ Tincture used by M. Cundet of Geneva was 48 gr of Iodine to ℥j. of alcohol - Dose - beginning with 5 drops - to increase - according to circumstances -

The solution of Iodine - consists of.

Hydriodate of Pot gr XXXVj.

Water ℥j. - by adding 10 grains of Iodine this is converted into the Iodureted Hydriodate of Potassa the Preparation first used by Cundet - here it may be remarked - that the salts of Iodine promote the solubility of Iodine itself & of all the Iodides - & in truth - the ~~[illegible]~~ of the Iodides or of the Iodates - always attract the Hydr of the water & invariably become Hydriodides or Hydrates - even the Tincture when taken into the stomach undergoes ~~[illegible]~~ a change - The preparation of Iodine in most common use is that of Lugol or Jackson -

Iodine. ʒj.

Iodide of Potassium ʒij.

Water ℥viij - this is called Lugol's - Diluted or Jacksons Iodine Solution in contradistinction to a certain formula purporting to be Lugol's solution but which is not. the Quantity of water being marked ℥viij instead of ℥iiij. as above. - the dose of this preparation is set down at from 10 to 16 m. three times a day - Fifteen drops above quoted is in every respect equally good as this

The tincture should not be preferred to the solution - for in fact the Iodine is precipitated as soon as it comes in contact with the tongue in the act of swallowing - The Hydriodate which has not this objection & which is also less acid may be substituted for it in all cases - the dose being increased - These preparations should be kept in closely stopt vials - in order to prevent evaporation & the consequent precipitation - The preparations of Iodine suggested by Mr Tucker in her inaugural thesis some of which I have quoted - I think are highly judicious - he has observed the precaution of not making his solutions strong - leaving it to the practitioner to regulate the dose according to circumstances - This remedy is so active & its employment so general - that it becomes a desideratum. to have some fixed formula - of preparation in the shops - The Tinct. is the only one which is now "officinal - Dulcot observes that Iodine had its constitutional influence by being absorbed - Kalis perceiving the beneficial influence of Iodine washes - suggested & employed with considerable effect - Iodine Baths -

'Iodine. ℥ij. Iodide of Potassium ℥vj - dissolved in - 8 gallons of water - when thus employed - it produces all the beneficial effects of the Iodine given internally - without producing any of those disagreeable effects which sometimes result from its internal administration - in subjects whose idiosyncracy may be inimical to the latter mode of employing it - but as this mode of Employment

in hospital practice would be expensive - he advises that after the bath is given - that advises that the Iodine should be precipitated by the acetate of Lead - & again collected for future employment - he employed the bath successfully in 109 cases - four other receiving no benefit. We have seen that Iodine was easily volatilized. this property also has been taken advantage of - by medical practitioners - & has been employed extensively in the form of vapour in the cure of diseases - this is a suggestion of Dr Thompson - he effects this either by putting a solution of it in a vessel resembling a tea-pot & applying heat or else by evaporating it in an open dish. in a close room - regulating the quantity of vapour by the quantity of Iodine employed -

Ointments of Iodine.

Hyd Iodidate of Pot: ℥ss.

axung. ℥j. m this is converted into the Iodureted Hydrar: oint: by the addition of from 10 to 15 grains of Iodine -

Iod: Lenament. Ext. of Iod: ℥j

Sap. Lin. ℥j. m - also

Iodine - 1 part

Calomel 16 parts

Axung 48 parts. these latter formulas have been also suggested by ~~mr~~ Mr Fisher of this city - these ointments have their local & general effects

is hoisted however would be dangerous. It would not
suffer the boat to swim. The engineer [illegible] Jenkins attempts
to overcome this difficulty by the adoption of a system of
[illegible] [illegible] - he employs the [illegible] accompanying
in 1 of Cocos. Four [illegible] is seen in sketch. He says
that Jenkins was easily worked. This method also has
been taken advantage of. In Madras there have
been employed [illegible] in the form of [illegible] in the [illegible]
of [illegible]. This is a description of the Thames. In
[illegible] the [illegible] of [illegible] is a [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]

we turn now from the simple preparations of Iodine to those of its compounds. it would be a work of supererogation to enter fully into the various processes of pharmacy - each of this innumerable class - but will content ourselves with briefly alluding to those which have been introduced into the Pharmacopeia with the sanction of medical authority -

- 1st with Mercury. - The English Pharmacopeia recognise but two of this class - the Protoiodide a yellow - & the Deutoiodide a red Iodide of mercury - this has given rise to some confusion ~~among~~ according to our's - there three preparations - the proto a green. the Sesquia yellow & the deuto a red - the sesquiodide being analogous to the Proto: Iodide of the English. here again we see the necessity of having some fixed form by which to preserve the uniformity between the written prescriptions & the preparations of the apothecary -

The Protoiodide is obtained - by the double decomposition of the Proto chloride of mercury & Iodide of Potassium - the Deutoiodide from Bichloride of mercury. & Iod: of Pot: & the Sesquiodide is got all three from the Proto nitrate of mercury an acid solution of it - when the salt is neutral - we have a green precipitate or the proto Iodide, when slightly acid - the yellow sesqui. one preparation is question & when in excess the red prep. these modes of preparing it are such as are laid down in the books & I have tried them but - must confess that I am not familiar with the changes which take place -

[illegible] from the simple hypothesis of [illegible] [illegible] Empirical. — If we take as a unit of [illegible] [illegible] with the common psychology. Each of this [illegible] [illegible] sleep. But with [illegible] [illegible] [illegible] to these [illegible] have been [illegible] with the phenomena with the [illegible] of [illegible] [illegible].

— III with Memory. — The Indian Philosophers [illegible] [illegible] of this [illegible]. The Pratyabhijna [illegible] — With [illegible] [illegible] [illegible] of Memory — this [illegible] [illegible] to [illegible] [illegible] according to [illegible] — [illegible] [illegible] [illegible] — The [illegible] [illegible] [illegible]

- of these - the Iodeto Iodide contains the greatest proportion of Iodine - the dose of any of these should not exceed the 1/8th of grain - the Proto & sesquiodide being insoluble in alcohol & water should be given in pill - its also the Iodeto &c. we have also Iodides of Zinc, Copper, Sulphur & Gold - these however are not much employ'd - except that of Sulphur in Scabbing - Ointments &c -

Iodide of Lead. from the double decomposition of Acetate of Lead & Iodide of Potassium - this is a soluble salt of lead of a golden yellow Colour - Iodide of Iron - was introduced into medical practice by Dr S. Jackson - according to the following formula.

Iodine ℥x

Pure Iron filings ℥v

Water. ℥xij ss. - 3 to 10 drops three times a day

This preparation can be made extemporaneously & for the occasion - a small quantity of Iron filings in excess should be kept at the bottom of the vessel - this will prevent the Iodine from precipitating - The Iodide is of a greenish black colour. The last which we will notice is that of the Iodide of Potassium - one of the numerous modes of obtaining this salt is by throwing a certain quantity of Iodine into a saturated solution of Potass - this is easily decomposed by Sulph^c acid these salts commencing with the Iod: of Lead are deliquescent they should be administered in solution - all the preparations of Iodine in solution become Hydriodates &c.

Ointments of all the Iodides - are in use - the proportions for making the is on an average ℥j. of Salt to ℥j. of Hogs lard —

The object accomplished by the combination of which we have been speaking - is to have the Iodine in such a form as to adapt it to some specific purposes - the simple solution of Iodine has its influence pervaded over the whole system - arousing the whole absorbent system into action - but when combined with other medicines - whose action is ~~[illegible]~~ on some particular organ or tissue - the Iodine by this means is brought to bear also on the same organ - Dr Thompson's view of the action of the Hydriodate of Iron - is rather incompatable with the chemical nature of Iodine. He says that it is redissolved & that either - we have an ~~Iodide~~ Oxide of Iron formed & we have a proto Muriate of Iron. - & the Iodine is absorbed - now in the 1st case we would have - Hydriodic Acid formed & in the - 2d. a simple insoluble substance - Iodine ~~itself~~ - Either of which it would be dangerous to administer - whenever ~~the~~ decomposition - takes place in the stomach - the Iodine must exist in the form of Hydriodate - before it can be absorbed into the system - There are many other preparations of Iodine & the metals to which we have not alluded - but if they have any claims upon the attention of the medical practitioner - they have not been appealed either by the Chemist or the Pharmaceutist

From the consideration of the chemical history & properties — & the Pharmaceutical preparations of Iodine. I now pass to our chief object of consideration its Therapeutical Applications —

Iodine may be employed internally & externally. In both cases it is absorbed & has its constitutional effects — But when given internally we have two series of actions — 1st Local & then General — its local action is that of a tonic to the muscular tissue of the intestines &c. — where digestion is languid & ~~the~~ system debilitated. — the evidences of its local action are an agreeable sensation of warmth — when first ingested — & subsequently — increase of appetite — Iodine after ingestion has been discovered in the blood & all the secretions of the body — when thus taken into the system — its action is various in ~~proportion~~ according to the state of the system — Dr. Channing in an essay — published in the Feb: number of the Journal for 1834. "thus defines its action — "it diffuses excitement & equalizes the circulation — thro' the minutest vessels engaged in the functions appropriated to the absorbent & Exhalent system — to the cellular, dermoid, & mucous tissues" Iodine is therefore destined to these capillary vessels — they are stimulated, to increased & more vigorous action & by virtue of this new excitement — the morbid irritability supposed to exist — is remedied — thus Iodine acts as tonic to the intestines improving the appetite — it stimulates the absorbents to new action & of course — by the aid of

by the aid of diet & exercise - the wasted energies of the system will be repaired - & the various functions restoration - In the whole range of the Materia medica is there is not a remedy - whose action is more salutary - in cases in which the function of Nutrition is disordered - that is where there is a vitiated state of the system arising from this cause - as in deficient Nutrition or morbid nutrition - but its employment extends numerous & various forms of disease. which will be considered -

As we have seen - Iodine as an exceedingly active substance hence we should observe the utmost precaution - in its administration - the state of the intestines of the constitution, the dose, & the length of time during which it has been administered - are all to be taken into consideration - for the neglect of any one of these precautions might bring if not fatal at least painful & disagreeable symptoms.

As I have before said the action of this remedy varies with the preparation used & the dose should always been increased but gradually & cautiously - persisting upon the first evidence of any disagreeable symptom - during its employment also the patient need not be restricted too closely in her diet - it should only be a nourishing one - & if convenient should also be accompanied with a moderate degree of ex-

exercise. we have observed that it was especially a stimulant-tonic & generally - hence it should not be employed when there is any evidence of irritation in the Alimentary Canal - & it is contraindicated also in inflammatory conditions of the system - hence where its employment is designed in such cases it should be superseded by the free use of the lancet. - The legitimate employment of Iodine is asthenic states of the system. - in cases of debility arising from defective or morbid nutrition - The importance of Iodine in the Cure of disease, - & its particular effects. I shall now endeavor to illustrate - by an appeal to the experience of Practitioners -

Scrofula - Dr Stokes of Dublin in giving the Pathology of Scrofula - has satisfactorily shown - that the scrofulous diathesis - is nothing more than a preponderence of the white over the red tissues - & as the lymphatics are the proper vessels of the former - in like manner the must also have a predominance over the nervous system - & a priori - there must be a deficiency of fibrin - & which may be called the vital principle of the Physical man - "our treatment therefore should consist of all those curative means - which tend to invigorate the system & increase the existing amount of vitality." & to avoid all those causes which tend to developes any latent predisposition to the disease. But if these precautions should be disregard - the unfortunate individual so predisposed - entails upon himself a disease which is loathsome above all others - The symptoms of Scrofula - are such as would be expected - to arise from debility of the absorbents. The 1st link in the chain is the enlargement of the Lymphatic glands

they some time increase to a enormous extent - they finally suppurate or become steatomatous Schirrous or osseous. - & as these glands are in every part of the system. so they enlargement be seen. In the mesenteric - in 19. case out of 20. children carried to our Alms Houses - ~~or~~ die of marasmus. exhibiting Pot Molem - enlargement of the mesenteric Glands. Tubercles in the lungs. a trachea are the invariable concomitants of strumous habits - & in fact the occur in every part of the body modify. the symptoms accord to their locality - In the liver, the meibomian glands of the eyes these ulcerate discharging - a viscid pus. which sometimes agglutinates the eyelids - after these symptoms have existed for some time they ventuate in others which are either the precedents of dissolution or which entail a lingering miserable existance upon the unfortunate victim - Hufeland enumerates - among these results, - "Marasmus, white - swelling of the joints, spontaneous luxation, scrofulous deafness, Tubercular Consumption, spina bentosa & Caries, Rachitis & Cancer & Cretinism - also nervous affections - These are the sequelae of a scrofulous habit. exposed to developing agents - & then neglected - - How important is it, for the sake of humanity - that some efficient plan of treatment - should be adopted by which such a woeful array of symptoms should be radically removed - Naturally for humanity. fraternally for the honor of the profession - we can point to one remedy - whose efficacy has been tested - & proven. The testimony in favour of Iodine is strong - fully authenticated & corroborated by a limited personal experience -

And in fact it has been so extensively employed & with such uncommon success - that it is almost regarded as a specific - From the view we have taken of Scrofula - there are two indications to fulfil - 1st to give tone to the digestive functions & 2d. stimulate the absorbents both of which indications - Iodine fulfils - as has been demonstrated by its operations on the general system glandular enlargements are removed - a new and healthy action takes the place of the morbid irritable or atonic state which precipitated - & thus all impediment is removed - to the healthy round of the circulation - & in the meantime - the vigour of the also the general system is restored by the digestive organs being placed in condition - in which its functions can be performed - wholesome & nourishing food being received & appropriated to the body -

In St Thomas Hospital in London. the following prescription was employed -

Iodine. gr. ij

Iodid Phosph. IV

Aqua dist: Oj - m. Commence with ℥j increase to ℥vj. three times a day - this being taken for some weeks - the medicine was then suspended for a time - & a dose of purgative medicine administered - by this treatment all disagreeable symptoms were avoided - In those who were much emaciated the Iodide of Iron - was used - the patients were also anointed twice a day - with the oint of Iodide of Mercury & Lead ʒss of the former - ʒj of the latter to ℥j of axung - by this treatment 20 out of 67. manifested no evidences of improvement

but in fact it has been so fashioned, explicitly & tactfully, every
detail. That it is always represented as a character - Yet he was
no lame duck of a stylist - There are too coincidences to explain
away to pure chance in the elaborative pattern & all showing the
work of artistic & creative design. Joyce himself is not seen as a hero
in the novel - the personal experience of Stephen & his
journal - a record & healthy action takes the place of Joyce's
initiative & effaced while the other heroes - Yet his art is represented
in terms of the heroic ideal of the revolutionary. His ide-
ness lies - the history of the [illegible] the general direction is indicated
in the [illegible] opens leaving chance in control. in artistic of
[illegible] are developments - [illegible] Nevertheless Joyce
seems - assumed [illegible] to the world -

It is Thomas Aquinas in short. The [illegible] Aristotelian con-
ception.

Stephen Pp. 11

Stephen Philosophy IV

Cyril Tech. Pp. - In conversation with Stephen
& Lynch. Three lower orders - his living below for time usually. He
[illegible] one the simplest [illegible] for a time - [illegible] of hunting
[illegible] [illegible] & [illegible] - in this [illegible] the [illegible]
[illegible] were [illegible] - [illegible] [illegible] [illegible]
[illegible] of [illegible] - [illegible] - the [illegible] [illegible] [illegible]
[illegible] [illegible] - with the [illegible] of [illegible] [illegible] 327 of
the [illegible] - 31 of the [illegible] to 31 of [illegible] - in this [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

the cases alluded to were children - a similar course of treatment - equally applicable to adults but in increased doses. - this is the only - Hospital report that I have been able to procure. - the success in these cases - though not so complete as is represented in the reports of others - is very satisfactory - & is sufficient to encourage sanguine expectations - Marasmus - which is nothing more than a symptom of scrofula is so universally fatal when it has existed for some time that if a cure is performed - it may be regarded as an exception to the general rule - Even this condition of the system Iodine has been employed & highly recommended, in white swellings where they have not existed for a long time - the internal & external employment of Iodine - has been resorted to successfully. - In Scrofulous Phthisis where the instances of success are rare - it has been sometimes successful - & often highly beneficial - palliating the symptoms - facilitating expectoration & reducing & softening the pulse - for this purpose the vapour of Iodine has been - recommended by ~~Dr Thompson~~ Dr James Murray. he says "it promotes easy expectoration & reduces the pulse" this modification of its action he supposes to depend upon "the vapour contained in the free Iodine - In Scrofulous of ~~Phthisis~~ Dr Channing - relates several cases in which he employed the ~~Iodureted~~ Hydrocyanate of Iron with signal success - The formula used by him - consisted of -

Mentheo: Hydrocy: gr iv

Hydrio: Polupa ℥j

Aq. distil. ℥j m. & Dose inhaler - ter die

the cases adduced to some children - a satisfactory course of treatment - may appear to exhibit, and is accordingly treated - this is the only - therefore equal effect I have been able to produce - the among the boys - there not is complete or in advance in the opinion of others - in my estimation - this disposed to encourage dangerous speculation - Harmony - which is taking place from a application of strength is a miserably baked when it has to be [illegible] - it was in [illegible] - it may be increased or the origin to the [illegible] - from the [illegible] of the opinions [illegible] been [illegible] - [illegible] - in which [illegible] - [illegible] have not [illegible] for a long time - the natural [illegible] and [illegible] of [illegible] - [illegible] - [illegible] - [illegible] the [illegible] of [illegible] - it has been [illegible] [illegible] - [illegible] the [illegible] - [illegible] the [illegible] - for the [illegible] the [illegible] of [illegible] - [illegible] by [illegible] [illegible] - [illegible] [illegible] - [illegible] [illegible] -

Scrofulous Ophthalmia - In this case - Dr Channings preparation seems to be better adapted than any other - a slight impression on the gums being thought advisable - in combination with its other effects - an Iodine wash might also be serviceable - as a collyrium - Cancerous tumors - in the incipient state - have often been reduced by the employment of Iodine - a case which fell under my own observation at the Baltimore alms House has confirmed me in this belief - the tumor occured in the left breast, presented all the external characteristics & symptoms of Cancer - & was so declared to be by the Consulting Physician - the woman was also of a scrofulous habit - a fair trial was made of Fowlers Solution, anodynes were given to relieve symptoms - these failing - an application was suggested during the interval of time given our patient to make her mind on the subject by way of amusing her - I directed - Jacksons Iodine Solution & the Iodine ointment to be used as directed in the beginning of this paper. under its application the tumor entirely subsided - in the course of 2 or 3 days - she was free of every symptom - no disagreeable effects were experienced by the patient - altho the medicine - was unremittingly persevered in - In all these cases remedies should be employed internally & externally - our great object is - to set the system right - but in the mean time the particular symptom which urges the sufferer should not be left to shift for itself

In endeavoring, to remove a glandular swelling or sarcomatous tumor we must not forget that - they are mere symptoms of a disease which pervades the whole system - our great object should be to grapple with & subdue - the constitutional disorder which is the cause - of these symptoms - & hence we must enjoin in the strongest terms all those precautionary measures which serve to retard the approach or subvert the tendency to the disease - such as exercise, pure air, digestible but nutritious food - It is in this disease that the employment of Iodine is pre-eminently successful - there are others also in which it is highly recommended & of which we will speak. - before going to these however - I shall speak of its use in Goitre - This name is employed to designate a disease which consist in an enlargement of the thyroid gland - the causes of which are variously accounted for - all of which resolve themselves into mere speculation. - This enlargement is the result of sudden congestion or of chronic inflammation - the first form of the disease which I have seen in one instance was cured by antiphlogistic means - the Iodine was employed - but the disease was too soon overcome for the Iodine to have contributed to the cure. - the second form may arise from congestion not overcome by the above means - or from debility of the absorbents the circulation being impeded — when if this state is not overcome this sometimes produces a degeneration of the healthy structure of the gland - it becomes - schirrous, osseous, hypertrophied &c &c

[illegible]

which glands become ossified - of course all treatment would be of little avail - The result of Cendel & Lugol's practice in quite - pulsate question as to the efficacy of Iodine aside - Lugol's Solution, the Tr & Iodine ointment - the remedies to be used - Lugol also employs the Bath of Iodine - & he states that out of 109 cases - in which the bath was used daily - only four received no benefit - This was the first disease in which Iodine ~~has been~~ was employed - it originated with M. Cendel - of Geneva - he used it at first topically. *

In chronic & uncomfortable diseases which arise from disordered state of the alimentary canal & an anemic condition of the system - Dr Thompson advises the Hydriodate of Iron as an indirect - emmenagogue - restoring the tone of the alimentary canal - promoting the activity of the circulation & improving the condition of the circulating fluids - & thus by removing the state upon which the disease depends places the ~~functions in~~ organs in a condition to perform their regular & healthy functions - for this purpose he employs -

Hydriod: of Iron. gr ij
Tr Aurant: ℥j
Aq: distill: ℥xj. take three times a day

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* Dr Manson of London - Medicine 115. cases of Bronchocele 101 of whom were females - he used. ℥j. of Iodine ℥iss of rectified spirits 10 drops three times a day. also Lin: Sap: Comp. ℥j / Tinc Iodine ℥j in opt. once a day smearing the skin over the tender for its employment - for the oint is highly irritating - 11 of the above cases dismissed for non-attend - I not at all benefited by the medicine -

In paralysis arising from the compression of effused fluids on on the brain or spinal ~~marrow~~ or when an injury is inflicted near a nervous chord & there is a subsequent deposit of lymph compressing it so as to destroy its function for the time the solution of Iodine would no doubt absorbed & remove the impediment & then restore the function of the part affected the eustachian tube also has in some instances been blocked up in a similar manner - & Dr Manson repeats several cases of deafness from this cause which he had cured -
Chronic Rheumatism Syphilic Nodes - Gleet & secondary Syphilis have all been subdued by this remedy - In cutaneous disease arising from a Syphilitic taint, or otherwise the ointment of the ~~Iod~~ Iodide of Sulphur & a solution of the same iode act well & cure the complaint - in Chronic gleet given internally & by injection - the Iodide of mercury carried to Ptialism in these cases is the best remedy they bring about a new & healthy action "breaking up the morbid catenation" - Under the cognizance of the attending Physician of the Baltimore Alms House - I gave the Iodine a fair test in the case of a woman who had Chronic Rheumatism & nodes combined - it was one of long standing perhaps 12 months. It was no doubt induced by the improper use of mercury in the cure of an original venereal complaint subsequent to her falling under my charge she had had been subjected to ~~her pelvis~~ to the whole catalogue

of remedies commonly resorted to but without the slightest sensible improvement, - many of these I repeated - & having re-employed the remedy in question I resorted to it as an expiment first applying blisters to the local affections - which when removed were dressed with the Iodine ointment - I taking Iodine solution ~~gtt~~ internally - this treatment - was persevered in for thirty days - some time after the disease was overcome - she was employed for work & has been well ever since being about 8 months - No disagreeable symptoms occurred ~~in~~ the patient was voracious & indulged in contrary to direction - it might be proper also to state that previous to the Iodine treatment she had not had the use of the right arm or foot for many months - the ankle & wrist joints being affected - the nodes were located on the ulnar side of the left arm - In this case there was certainly a good deposit of semi organized lymph - for the joints had been literally immoveable - & sensation in the part had been in a great measure obliterated - the natural form & motions of the parts being entirely restored - leave no doubt of the extraneous matter being entirely absorbed - the health of this individual being improved in other respects - & the remedy used not being complicated with any other - I think its success deserves a second trial at least - The outlines of the case might have been given - so far as it bears upon the subject -

Dropsy is the last disease that I shall notice connected with this subject - Dr Barrow of Glouster - observes that dropsy after the distension has been relieved by Paracentesis - Iodine is a powerful diuretic - its employment is reasonable - both in cases where there are debility & where there is an enlargement of the liver - there are numerous cases on record absolutely at first hopeless in which this remedy has acted like a charm - its action is sometimes slow - patience on the part of the practitioner is then required - & lastly - Iodine is recommended in severe salivation as having the property - of removing inflammation of the salivary glands & healing ulceration produced by mercury. - Although the list of diseases are great & well authenticated in which Iodine has been used successfully & although - the theory of its action is clear & satisfactory - I dont look upon it as a sine qua non. In many of the diseases spoken of other remedies may be more successful & in certain states of the system & certain idiosyncracies - this would be entirely contraindicated - None but an Empyric a blind enthusiast - can look upon any one remedy as a specific in all or even in a single disease - for since no disease in two individuals - or at different times in the same individual corresponds exactly in all its symptoms it would be the height of folly to suppose that one remedy would cure all, at the same time while every suggestion that has a respectable origin & is reasonable - deserves the consideration & respect of the ~~end~~ & head & heart of the profession -

Ultraism seems to be the order of the day - in Politics Religion - & unfortunately in medicine - To exaggerate & embellish seems to be a growing propensity. - in searching for an antidote to disease - nothing short of specific can satisfy its votary - & each new remedy is thus announced to the profession, ~~immediately~~ this is a signal for its indiscriminate employment - & no sooner is it found to be unsuccessful in some case in which it has been injudiciously employed - than the fatal remedy is denounced as a poison - it was thus - at the 1st introduction of mercury it has been so with Iodine -

Having considered the beneficial results - of Iodine in moderate doses - the remainder of our considerations shall be devoted - to the injuries which may result from its injudicious use.

When Iodine has been persevered in for some time - the following effects are gradually induced -

"1st. on nutritive life - Absorption of fat & increase of all the excretions - of perspiration semen & catamenia & urine - difficult respiration -

2d. on Circulation - want of arterial action - fullness of the veins - blue lips - & serous infiltration

3d. on innervation - vision becomes impaired - Hypochondriasis &c"

- when the mucous membrane is in an irritable or inflamed state - of when the dose - is too large - Cephalalgia, nausea diarrhoea, pains & in the stomach - & tenesmus - ~~gastric~~ heat & burning of the stomach - accompanied with much bilious derangement, -

In the following case we have enumerated the symptoms which characterise its action when taken in poisonous doses.-

"A female of a nervous irritable habit swallowed ℥ss of the Tinc: of Iodine - The immediate effects were dryness of the throat & Esophagus, pains in the stomach, nausea, efforts at vomiting face flushed, eyes watery, pulse, small, pains of epigastrium exasperated by the slightest touch & Convulsive pains of the upper limbs - "Journal General." all of these symptoms show that its action is expended on the alimentary canal - as an acrid irritant - "a post mortem" examination would no doubt develope ulceration of the mucous coat of stomach & inhalt exposure to the concentrated vapour of Iodine is said to produce violent Cholic pains.

In the two first orders of symptoms - a suspension of the medecine followed by a brisk cathartic - with other antiphlogistic means would no doubt remove them - or if this should not be thought necessary a diminution of the size of the dose - One thing should however be kept in view - ie. that Iodine has the property of accumulating in the system & perhaps attended to - its poisonous effects might be in this way induced - But if the dose is a large one - or if it has been accumulating in the system for some time - our treatment - should be active, - give an emetic or evacuate the stomach by means of the stomach pump. —

the subsequent treatment must be sedative & antiphlogistic such as is resorted to in violent Gastritis &c. Opiates to allay irritation, topical depletion over the abdomen & demulcent drinks, — The presence of Iodine may be detected after death, — by putting a portion of the contents of the stomach into a vessel healing it with Nitric Acid — & then applying heat to the solution, when its characteristic violet vapor will be seen to ascend & if a piece of paper — saturated with a solution of starch be suspended over it — it will change it to a deep blue color.

Iodine has also been employed as a test for other poisons thus when thrown into a solution of Bichloride of Mercury or any of the persalts of this metal it — we see deposited a beautiful red precipitate the deuto Iodide of Mercury. as if with the protosalts — a green or yellow precipitate, — again if you admit into of the solution of Iodine & starch — a few drops. into. a vessel containing arsenic — the solution will become of a reddish brown sulphuric acid will restore, the blue color by again taking up the arsenic — in corrosive sublimate — the blue color will not be restored by the Sulph^c Acid the presence of Starch may be detected in any preparation containing it — from its giving a blue color with it.

In Conclusion — Conscious of having done neither myself nor my subject justice although as is

Be to its faults a little Blind
But to its virtues very Kind

1837

An

Inaugural Dissertation

on

Hemorrhage

Presented for the examination of the Provost Trustees and Medical Faculty

— of —

The University of Maryland —

for

The Degree

of

Doctor of Medicine

by

Prage Nelson Hall

of

Baltimore

Baltimore County

Maryland

Preface

The author of this hopes that the Professors will not expect any thing new, as he has drawn the substance contained in the following pages from Smith Cooper Jones & others.

To
Nathan R. Smith M. D.
The following pages are respectfully
dedicated by his pupil
George Nelson Hall

ervations upon the Arteries. – The arteries are those tubes which convey blood from the ventricles of the heart and terminate in all parts of the body. As they divide and subdivide they constantly decrease in diameter, and all their divisions end in about twenty one.

When we trace them to their extremities, we find they have four terminations: first in filaments, which inosculate with each other: second in exhalent extremities: third by continuity with the radicals of the veins: fourth by excretory vessells of glandular organs. The larger arteries run nearly a straight course, but it is different with the smaller, for they are even more tortuous than the veins, and as they are farther from the heart, they gradually diminish in size and increase in number, and ramify ad infinitum in the various organs, and from which the veins and exhalents seem to originate. They are distinguished from the veins by being more deeply seated, by their having no valves except at the heart, when cut fluid blood flows per saltum or by jets and after death, by their thick whitish coats, which are very elastic, and when cut present a circular orifice. The inner coat of arteries is said to be thicker

than the same coat in veins. The blood which circulates in arteries is not capable of furnishing them with support, for they are found to be furnished with blood-vessels coming from other arteries, and are termed vasa vasorum. They have nerves coming from both the cerebral and ganglionic systems. They also have absorbents vessels. They are covered by a firm cellular sheath in some regions especially about the articulations, which is capable of stopping the sudden diffusion of blood into the surrounding parts, and sometimes there is a sheath, which encircles the artery, vein, and nerve, and these cellular sheaths give nourishment to the arteries by imparting vessells and nerves to their coats. When the blood is partly impeded from circulation through an artery, it is found to diminish in size, even to the size of a thread, though it may have been an artery of considerable magnitude before, likewise when there is an over excitement a stimulation in an organ the artery is found to enlarge in direct ratio to the stimulation

Anatomy of arteries. The arteries are composed of three tunics or coats, the first or external which is composed of successive layers of cellular tissue, which makes it thick and solid. These layers may be successively stripped from each other by maceration. This coat is perfectly distinct from the fibrous tunic, or second or middle coat. "It is much more extensible than the internal tunic" (Meckel) Externally it is lost in the neighboring cellular tissue, and so the middle coat is adhere closely although it can glide upon it to a small extent. Its vital properties are very obscure, although the arteries receive some considerable nerves, and in general the arteries of the vascular system receive more nerves than those of the pulmonary. The physical properties of this coat are very important and remarkable, it is tenacious, extensible and very elastic so that when an artery is tied, by means of these properties it resists the pressure of the ligature, whilst both the internal tunics are lacerated and torn. In the brain and viscera it is remarkably thin, and this is the reason why it is more liable to rupture in the brain and so be the seat of aneurismal tumours in the viscera; but in the aorta and some other regions it is found to be

extremely dense. This is a peculiar arterial tissue.

The middle or fibrous tunic is composed of fibres flattened, wound in a spiral direction. These fibres do not wind entirely around the artery, but some one half and others two thirds round, their extremities passing each other, and are said to have smaller fibres which unite the larger laterally. The colour of this tissue is of a yellowish red, it is elastic, firm hard and dry; although it is called a peculiar, arterial, tunic, yet (I believe) it is found in the cystic duct, in the ligaments of the vertebra and in the trachea. This membrane is the thickest of the arterial tunics, and maintains the cylindrical form of the artery, it also has greater strength to resist a force which would distend the artery. Its thickness decreases in proportion to its distance from the heart, & also varies in the different parts of the artery, as at its curves, where its convex part is thicker than the concave, also where it divides at the angles. It is extremely elastic, and when cut in the dead subject presents a circular orifice, because its fibres are arranged in nearly a transverse direction, and on this property, depends its rupture when tied with a small ligature. Parry's experiments prove that

it is not much concerned in the circulation, but it antagonises the contractile property of the artery

The internal or serous tunic. This tissue is the most delicate of the three. It does not appear to be so much formed for strength, as to give a highly polished and lubricated surface for the blood to pass over in the circulation, for we find on the surface, a fluid resembling serum, and which is secreted by the membrane itself. This membrane is very brittle, and when a ligature is tied around the artery, it is found to give way together with the middle tunic. Is this this membrane by its duplicature formes the valves. When a divided artery is seized by the forceps, or tenaculum, and is violently pulled this membrane is found to give way before the external tunic will yield, and is found to be torn in many places

Functions of the Arteries. It has long been a question among physiologists whether the arteries have a vital activity, in regard to the circulation independant of the heart. Professor Smith has stated the question in the following terms. "Are the arteries merely sanguiducts responding to the action of the heart by virtue of their elasticity alone, or are they endued with a vital contractility by which they actively aid the transmission of their contents?" He contends that arteries have this latter property, and it is with reason, for we cannot attribute all their phenomena to their elasticity alone.

It is a fact admitted by all that arteries contract under the action of Galvanism, Some of the acids, the external air, and the knife. That the arteries possess vital contractility, is proved by the following circumstances, firstly Hunter has shewn that the arteries contract more when wounded during life, and in the moment of death, than they do after death by their elasticity alone. Secondly; the arteries do not always, and in every situation exhibit the uniform phenomena of contraction

and expansion, as in a paralized limb. We find the pulse is sometimes deficient, although the pulse of the opposite side, performs its functions in a healthy and regular manner. On the other hand the arteries beat with an extraordinary power, and violence, and this happens in an artery which is inflamed: Thirdly the pulse is different in different parts of the arterial system, as in intermittent head-ache, we find one temporal artery beating with much greater rapidity and violence than the other, which is more frequently regular with the pulse of the wrist. (Porter). Fourthly. Local irritence cause them to contract whilst others excite them to dilitation.

Professor Smith has given a case in his work on the arteries, shewing that the recurrent branch of an artery beat with great violence, and threw out a large quantity of blood: this cannot be dependant on the mere elasticity of the artery, for the blood in this case was thrown out by jets, shewing that the artery, in a manner pumped the blood from the capillaries and anastamosing branches.

The different pulses noticed in disease, cannot ~~simply~~ be attributed to the blood's passing through the arteries, by the force given to it by the heart, and that the blood is propelled through the arteries independent of the heart is shewn by the blood circulating in monsters which have no heart

Pathology. The arteries like other tissues are capable of repairing injuries inflicted upon them, having nerves, lymphatics, veins &c. When an artery is divided, it usually retracts and is concealed, but this depends very much on its situation, as when an artery traversing a bone is divided, it does not retract at all or very little. Again an artery traversing a loose cellular tissue, will retract immediately so it cannot be seen, and when both artery an sheath are divided, they will both retract, consequently the artery cannot retract so much.

Hemorhage from Wounded Arteries. So soon as an artery is wounded there begins to flow therefrom vermillion colored blood by jets, corresponding to the systole of the heart and the pulse of the artery, but between these jets and the diastole of the heart, the blood still continues to flow from the wound but not so profusely. Frequently the blood is poured out from that part of the artery which is furthest from the heart, and when this is the case the blood is of a black and venous hue generally, and is an even stream like blood flowing from a vein. Mr Luthrie states that when consecutive hemorhage takes place,

it is most frequently from the inferior part of the artery. When arteries are wounded internally and not externally, as by the bone of a fractured leg or arm, or by the oblique fracture of a narrow instrument, and the blood cannot escape externally, it is called a false diffused aneurism, and is characterized by a red or brown mottled appearance of the skin which is tumid and when the finger is applied to the tumor a soft pulsation is felt, and at that part where the artery enters the tumor, there is a thrilling rush of blood felt entering the tumor. When the wound in an artery is small, the tissues around it tense and elastic, so that the blood cannot escape externally. This is called a false consecutive aneurism.

Spontaneous Cessation of Hemorrhage from wounded arteries. According of the artery, according to the size of the wound in large arteries depend whether the wound will prove fatal or not. If a large artery, the size of the femoral or carotid is divided, death is almost instantaneous, if not arrested by art. But whether the hemorrhage prove fatal or not, nature in almost every instance tries to repair the breach; this property of healing is resident in the tunics and in the blood. Thus nature, we see, has in-

stituted a process for saving the lives of those who must die from the smallest hemorhage, if art did not come to their assistance. For many ages this most interesting subject was involved in obscurity, and it was not untill the year 1731, that Petit undertook a philosophical investigation of it. After many interesting experiments upon this subject, he came to the conclusion, that nature arrested hemorhage by forming two clots or coaguli - one just within the mouth of the artery called the internal coagulum, and one between the artery and its sheath called the external coagulum.

Morand was the next who undertook to investigate this subject more deeply, this was in the year 1736, he allowed that the coagulum had some small share in arresting hemorhage, but that it was mainly effected by the circular fibres of the artery. These by a kind of corugation or plaiting thicken the longitudinal ones, and thus the two sets of fibres form a kind of ligature. After these came Louche, Acken, White and Kirkland blending the different the-

ries and out of them forming new ones.
But Beaumont denied the authenticity of either of the foregoing theories and contended that it was the swelling of the cellular membrane which stopped the hemorrhage. This view of the subject Dall also advocated. These were the different theories until Doct. Jones, by a number of experiments demonstrated the operations of nature in a beautiful manner, in surmounting the many obstacles embraced in this intricate subject. He came to the following conclusion of the process by which nature arrests hemorrhage. "An impetuous flow of blood a sudden and forcible retraction of the artery within its sheath, and a slight contraction of its extremity are the immediate and almost simultaneous effects of its division. The natural impulse however with which the blood is driven on in some measure counteracts the retraction and resists the contraction of the artery. The blood is effused into the cellular substance between the artery and its sheath and passing through that canal of the sheath which

had been formed by the retraction of the artery, flows freely externally, or is extravasated into the surrounding cellular membrane in proportion to the open or confined state of the wound. The retracting artery leaves the internal surface of the sheath uneven, by lacerating or stretching the cellular fibres that connected them. These fibres entangle the blood as it flows, and thus the foundation is laid for the formation of a coagulum at the mouth of an artery and which appears to be completed by the blood as it passes through this canal of the sheath gradually adhering and coagulating around its internal surface, till it completely fills up from the circumference to the centre. (Jones page 53)

According to Jones the first barrier in arresting hemorrhage is the external coagulum, formed between the sheath and the vessell. The blood being still, and resting within the mouth of the artery, coagulates, and forms the internal coagulum. After this nature institutes a process for the more perfect reparation of the injury. Accordingly the end of the artery

inflames, the coagulable lymph is thrown out by the vasa vasorum both between the coats of the vessell and in the coagulated blood. This becomes organized the blood absorbed, the former artery converted into a dense white cord as far as the first collateral branch - this happens partly in twenty four hours after the injury is sustained. If the artery of a limb is divided, circulation goes on by means of the anastamosing branches and this is called the collateral circulation. Means which nature institutes when the artery is punctured or partly divided. As yet it is not known to what extent a partial division of an artery can be healed by nature. When an artery is more than one third divided transversely, it will continue to bleed untill is entirely seperates by its own retraction upon its coats, or we will have a long continued hemorhage frequently recurring. When an artery is wounded it frequently happens that is is not opened exactly opposite to its sheath. The internal coagulation cannot be formed as the blood flows

rapidly along within the vessell, but the blood escaping from the wound between the vessell and its sheath and we have process of separation going on as if the artery was divided. If an artery retain its sheath and be divided to one fourth its circumference, nature will heal it, but if it has no sheath the opposite will be the result.

Lacerated Arteries. Professor Smith has proved in his work on the arteries that it is the rupture of the internal membrane forming the internal coagulum which is the most active agent in stopping hemorhage from that vessell. In opposition to the opinion of Doct. Jones, who says; "The natural means of suppressing hemorhage (the peculiar state of the coagulum & cupped) were the same in cases of lacerated arteries as in the ordinary wounds of arteries." In opposition also to Doct. Gibson's opinion who says; "that the indisposition of lacerated arteries to bleed, is owing to the shock sustained by the nerves.

Means which the Surgeon uses to arrest hemorrhage. Hemorrhage is divided into primary and secondary or consecutive; the first occurs the instant an artery is wounded; the second is after the artery has stopped bleeding completely, and then commences again. These means comprised First – the Actual cautery Second Escarotics, Third Refrigerants, Fourth Absorbents, Fifth Astringents, Sixth Compression, Seventh Torsion, Eighth the Ligature.

First The Actual Cautery. This was first employed by the ancient surgeons, and for many ages it was the most effectual means known for arresting hemorrhage. The old surgeons used heated irons for cauteries, these were made of various shapes and sizes, some being round, others oblong, others again square according to the operation for which they were intended. As other means were discovered for arresting hemorrhage these were thrown aside and modern surgeons but seldom used them. They are useful in operations for cancer and for diseases

of that nature, to produce a healthy action of the part and at the same time arrest the hemorrhage. The only cases in which it is necessary is sometimes after the operation for Hemorrhoids for which it was highly recommended by baron Dupuytren. After operations on the tongue, extirpation of the eye and diseases of the maxillary sinus. In applying this remedy we should always make the iron white hot, as it instantly deprives the part of vitality, and hinders that extensive irritation which an iron of less heat would produce. It also keeps the iron from adhering to the part which it would do if the iron were only red hot.

Second Escarotics. These substances are but seldom used by modern surgeons. They most commonly use the nitrate of silver, ~~and~~ to stop the bleeding from the superficial arteries of the skin.

Third Refrigerants. Cold water and ice are generally applied when we wish to use articles of this class. These are but seldom used except

in Epistaxes. When ice water snuffed into the nose or ice water applied to the back of the neck, both of which have been found very efficacious remedies. The objection to these is that they are apt to produce internal inflammation.
Tenth Absorbents. These are generally made of lint, sponge, agaric &c. assist in forming a coagulum and in this manner arrest hemorrhage. These are generally used in slight wounds of the skin.
Fifth Astringents or Styptics. These are often used by surgeons for stopping the bleeding of the smaller arteries, but are never used for arresting hemorrhage from the larger. There are a variety of substances used for this purpose, such as the sulphate of alumina, sulphate of copper, vegetable and mineral acids, creosote, decoction of bark, tannin &c. The sulphate of alumina has been a favorite remedy with many surgeons either in solution, powder, or substance, and has often proved effective when many others of this

class have failed. In the Hemorrhage of the Uterus, Professor Hall has given it most unqualified approbation, when used in a saturated solution, and says he has often succeeded with it when every thing else has failed. Astringents are generally used in hemorrhage of small arteries. The author of this once saw Professor Smith arrest an alarming hemorrhage after operating for hemorrhoids, with a strong solution of this substance, after he had endeavoured in vain to suppress it by several other means. In his work upon the arteries, he gives a case, in which his father had operated upon the neck of the patient, and arrested the hemorrhage by means of a lump of alum. Generally we ought not to use these substances in deeply seated parts, as they cause great irritation. The Kreosote appears to have the property of coagulating blood very shortly after its applications, and there are many experiments recorded in which it is said to have succeeded.

Sixth Compression. Compression is made by various kinds of substances, some of them being as soft as lint and sponges, and others again being much more dense, as wood ivory &c. The object of compression is to bring the mouth of the wounded artery well together, and thus obliterate it altogether & sustain the external coagulum. The pressure is made either direct & indirect it is direct when applied immediately to the mouth of the artery, and indirect when applied laterally & to some part of the vessell a little distance from the wound. In direct compression, we should be sure the substance is directly over the mouth of the artery, and when we use compress to effect this purpose, we should make a pyramid of the substance and apply it with its apex downwards and this we attain in situation by means of a roller. Compression is best made on those vessels which run over a bone, as the radial humeral, temporal &c. These are generally given into the hand of an assistant, who must take

care not to move his finger during the operation, if we are operating. Surgeons were in the habit formerly of filling the wound full of lint, but modern surgeons knowing the advantages of healing by the first intention, merely close the lips of the wound then applying the adhesive plaster and roller on the outside. In applying a compress for the purpose of stopping the bleeding of smaller arteries, we should dust it over with alum or some other astringent At the present time the bandage is generally applied to the substance of what we form our compress, but the disadvantage consists in its compressing the whole limb when applied to one, & thus impeding the flow of blood through the veins to the heart

Tourniquet. This instrument is generally allowed to have been perfected by Petit. There is an engraving given in the older works on Surgery representing an instrument used by Scultetus, for compressing the radial artery, but this instrument is quite different from the modern

Tourniquet. Before the invention of this instrument, it was dangerous to operate for amputation, and it was the fear of losing their patients from hemorhage, that stopped the older surgeons from performing any of those operations which the modern now undertakes and performs without the least hesitation. We are told that the older surgeons' knowledge on this point was so limited that it was with the greatest fear they removed the slough from the part that was mortified. The utility of the tourniquet is confined entirely to the limbs, and it is only used to suppress hemorhage in a short time, untill the surgeon can apply the means. Its compression is so great that if used for any length of time, it produces mortification.

The Field Tourniquet. This instrument is made by tying a knot in a handkerchief and placing this knot opposite to or over the artery of the limb which is wounded, then tying the handker-

chief loosely around the limb, then placing a stick beneath a handkerchief, and twisting it until the blood stops flowing. We should never compress the skin in the folds of the handkerchief. This instrument is usefull in a field where no other assistance can be procured to arrest the flow of blood. It should not be kept on too long as it is liable to the same objection as the former. There are several kinds of compressors, but that of Dupuytren is by far the best. It is formed nearly like a truss having a stiff steel spring, two thirds the circle in length and having pads at each extremity the one being soft and the other of harder material. This compress, by means of a screw, can be reduced to any requisite degree of contraction or tightness.

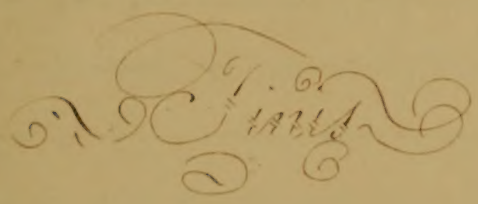
Seventh Torsion, or twisting the artery. This stops the bleeding by lacerating the internal tunic, in the same manner as a small ligature, and is used in suppressing hemorhage

from the smaller arteries after an amputation and some other operations. It is done by taking hold of the artery with a pair of forceps, pulling it a little distance from its situation, at the same time giving the forceps a twist.

Eight The Ligature. This is by far the most important of all other means used by surgeons for arresting hemorrhage. It is said Galen was the first who mentioned suppressing hemorrhage by means of the ligature, but it is to Paré that we are indebted for the first application of this instrument. Doct. Jones states that when a ligature is tied round an artery, the middle and internal tunics are lacerated, brings the wounded parts together, & thus mechanically arrests the circulation. Soon after the ligature is applied, the artery throws out lymph, which in a short time becomes organized, and the artery is then made a solid tunic as far as the first branch. The thread causes ulceration to the part where it is applied cuts through

it and in a few days entirely comes away.
Doct Jones says he never saw coagulating
lymph except at the cut margin of the artery
when the ligature was applied. Hence we should
a small round and strong ligature. Scarpa
who was afraid of the sudden ulceration
of the artery always applied soft flat liga-
tures and these would generally effect the purpose
intended, if tied securely and left on for a few
hours. Doct. Jones states that when a liga-
ture once ruptures the internal tunic of the
arteries and then taken away, will effect the
same purpose as a ligature left on, but then
have not been so successfull as he has in this
experiment. In tying arteries we should be
careful to include nothing but it within the
ligature. It should be tied exactly transversely
across the artery and with what is called the
surgeons knot. The cord should be strong enough
to bear the strongest of the operator's fingers
The instrument for sizing an artery is generally

a tenaculum, or a pair of common forceps we should be particular in tying both ends of an artery in traumatic hemorrhage, as the anastomosing branches allow the end farthest from the heart to bleed very profusely. When a ligature is tied around, one end should be cut off near the artery the other end allowed to hang out of the wound. Some advise we should cut off both extremities, but this should only be done when we use animal ligatures. Arteries are liable to many more diseases, but as our design was only to treat of hemorrhage, we shall not pursue the subject further.



1837

Dissertatio Medica Inauguralis de Ascite, seu Abdominis Hydrope;

quam,

Ad Gradum Doctoris assequendum,

Virorum qui Marylandiensis Academiæ rebus præsunt,

Ejusque Professorum

Examini subjicit

Eduardus Jacobus Christy.

Die mensis Februarii decimâ quintâ, Anno Domini millesimo, octingentesimo, trigesimo septimo.

Inclyto suo atque amato Praeceptori
N. R. Smith. M. D.
ob multa beneficia ab eo in se collata,
summâ lætitiâ
has paginas auctor offert.

"In freta dum fluvii current, dum montibus umbra
Lustrabunt convexa, polus dum sidera pascet:
Semper honos, nomenque tuum, laudesque manebunt."

De Ascite seu Abdominis Hydrope.

Multa diversaque hominem circumveniunt incommoda tempore, quo primò lucem aspexit, donec defetis viribus membris, ætatisque fessus morte lumina claudit. Vix parvus infans vitales auras duxit, vix risu oblectare parentes incepit; vixque materno brachia collo implicuit, quando mors crudelis ac sæva, miseram docens matrem nullas poni ejus potestati metas, vultui nitenti lucem eripit, purpureum sanguinem gelidum reddit, pulchrosque artus motu spoliat. Si verò cujusquam amabilis pueri decor atque innocentia mortis jamjam levatâ manu lethalem sagittam abripuerint; si quidem instantem ictum averterint, clypeumve volanti opposuerint telo; denique, si tenerâ ætate peractâ, ad juventutem ab ipso puero fuerit perventum; adhuc tamen imminet ictus, adhuc flexo in arcu velox lethalisque sagitta aptata manet. Alacris et fervidus adolescens gaudens equis canibusque et apici gramine campi, alta sperans, sibique plures felices annos promittens, sæpe ætatis flore morti occubuit. Nec est insolitum illum, qui ætatem virilem attigit, brevem vitam finientem videre. Sæpe ad tumulum clari utilisque civis e vitâ citius rapti lacrymas fundere coacti sumus; sæpe quoque mærentes ad triste sepulcrum secuti sumus gelida membra comitis, qui, primæ partis ævi immemor, pueritiæ ludos

4

spernens, animumque patriæ bono intendens, ac de republicâ statuens bene merere, mortis manu tactus periit, haud impletis consiliis, haud suis bono collato.

Sic aspera mors falce sternit viæ bene natum infantem, et hominem longis ab annis consumptum. Nunc quodam carus morbo auferitur amicus, nunc aliâ mortis specie alter dilectus a nobis rapitur.

Ast multos inter morbos, quibus corpus atteritur, haud ullus reperitur tristior lentiorve eo, quem, ad gradum doctoris obtinendum, describere quamvis imparibus viribus suscepi. Alii quidem morbi suas victimas agnoscere videntur; Ascites autem suæ potestati viæ ullos limites ponit. Abdominis hydrops, uti cruentatus ensis victoris, quem non delectat misereri, in omnes cadit, tum juvenes tum senes, fortemque virum formosamque mulierem. Aquâ vi irruit in eum, qui ingenuas per artes animum excoluit, atque illum qui mentem inornatam semper reliquit. Vita quoque inculpata, honestique mores huic malo inanes tutamen haud raro offerunt; nam sæpe pietate ac meritis gravem aggreditur. Hic verò dirus hydrops non sistit. Et regale palatium intrat, et humilem casam.

"Æquo pulsat pede pauperum tabernas
Regumque turres."

Servitis pressus, victorisque vinculis victus, illeque qui liberas spirat auras huic malo nec metas rerum nec tempora poni, atque imperium sine fine dari pariter sentiunt.

Quod grave malum ab ævo vetustissimo viguit. Nulla terra tam sacra est, nec ullum cælum tam beatum, ut ibi crudelis ascitis vestigia reperiri haud possint. Hic lethifer morbus hominem vitam apud paludem agentem adoritur, neque illum præterit, qui altissima montis cacumina incolit. Occurrit quoque eis qui saxoso in littore maris audiunt fluctus murmure resonantes; illisque qui procul ab rebus vitam tristibus curis carentem ducunt. Ferit etiam militem gravem annis, ac fractum membra dolore, illumque qui luxu atque ignavâ quiete perpetuò fruitur. Nulli ætati, nec sexui ulli hunc morbum infandum vitare datur. Frustrà parvâ voce clamat tener infans, frustrà decora mulier eximiam speciem ostendit; hic morbus flecti nescius vocem non audit, ac pulchritudinem temnit.

Præterà, cæteri morbi ægrotanti egregiam formam sæpe relinquunt, ascites verò in ore decorem fulgere haud sinit; sicque ægr gravibus et mentis et corporis cruciatibus uritur.

Adeat aliquis lectum hoc morbo languentis; videat hominem, super dominum rerum, validoque ac nitido corpore præditum,

nunc lassos artus insomni toro versantem; aut, O triste visu! nitentem videat feminam, quam olim oculis prosequi multos delectavit, nunc flentem, quum ipsa sua membra aspicit pristinâ carentia formâ; tandem videat pulchram juvenemque uxorem, quæ dulci nomine matris vocari diu speraverat, nunc, spe omni remotâ, imo de pectore questus trahentem; hæc omnia videat, et si cor ipsius malis alterius flecti potest, lacrymas tenere capax haud erit; et, dum ascitis vires agnoscit, artem medicam his miseris sæpe auxilium ferre gaudebit.

Ad quid, igitur, nobilius misericors homo animum intendere potest? Quem contra hostem majori gaudio arma capere potest? Præclarus bellator, qui fuso ab hoste crebrò lætus rediit, ac cujus currum secuti sunt reges vincula gerentes, nunquam seipsum ense accingere magis cupiit, quàm ego crudelem tyrannum ascitem subigere volui. Utinam verò mea mens cordi par esset; utinam rei caligine tectæ lumen præberem! Ætas tamen mea inexperta haud me sinit sperare aliquid obscuri lumine circumdare, aut quid novi in lucem proferre. Mihi tantùm datur ad artis medicæ peritorum scriptâ fugere, sicque vices iterare quas illi viri insignes de hoc morbo, tempore præterito, ediderunt. Quo et parvo in opere multa fore delicta non me fallit. Sed, viri docti, memor

lenitatis a vobis eis adhibita, qui me in hâc prâ praecesserunt, omnem depono timorem, ac bono animo opus aggredior.

Ascites, ut verbis utar celeberrimi Cullenii paulisper adauctis, definiri potest "Abdominis intumescentia tensa, sive elastica, sed fluctuosa, parcâ urinâ, febriculâ, sitique maximâ".

"Crescit indulgens sibi dirus hydrops,
Nec sitim pellit."

Ut istius morbi pathologiam cognoscamus, ad mirabile pulchrumque hominis corpus nobis est recurrendum. In eo plurima vasa reperiuntur, quae, ut rivuli, toto corpore vitalem ad cor sanguinem ducunt. Tempore autem recentiore, de aliis tenuioribus vasis certiores facti sumus. Haec ultima vasa a medicis lymphatica nominata fuerunt. Alia quoque minora inveniuntur, tum secernentia, tum exhalantia vocata. Priora quidem sunt omnia vasa quorum est munus quoddam secernere liquidum; posteriora autem tenuem halitum emittunt. Hujus pars una halitus, corporis superficie attactâ, evanescit; alia proprium petiens receptaculum tempore idoneo rejicitur; tertia verò pars interna irrigat cava. Ab hâc ultimâ parte oriri potest terribilis dirusque hydrops. Equidem dum vasa

absorbentia suis officiis rite fungunturr, omnis humor in cava effusus, velut aqua in aridâ terrâ, sitienter ab eis hauritur, atque ita morbus enasci nequit. Quando autem hæc vasa disparibus viribus potiuntur, humor auget, ac citò hydropem gignit. Hoc variis modis contingere potest quorum duos citare contentus ero. Primò, humor quamvis idoneus, copiosiùs effundatur quàm ut absorbentia illum removere possint; secundò, eâ humor potiatur spissitudine, quæ moram vasis officiis suis recte fungentibus affert.

Ast confitendum est medicos non idem de ascitis pathologiâ docuisse. Haud pauci quidem eam referunt morbido statui vasorum quæ sanguinem vehunt: Tàm debiles esse eorum tunicas dicunt, ut pars cruoris tenuior serum vocata per eas facillimè elabi possit.

Alii verò eam damno lymphaticis allato attribuunt.

Nec absunt permulti doctique, qui eam majoribus cordis viribus tribuunt.

Tàm inter multas ac diversas sententias, quænam est eligenda non mei est dicere. Singulas enim tenuerunt viri, quos filios suos patrem medicinæ agnoscere delectàsset. His ita rebus, nil aliud possum quàm dicere verbis poetæ

paulisper mutatis:

"Medici certant, et adhuc sub judice lis est".

De causis. Licet artis medicæ periti de ascitis pathologiâ multum inter se dissenserint, attamen de ejus causis sive proximis sive remotis unâ fere voce loqui videntur. Docentibus illis viris eruditis, inter causas citare mihi licet primò quidquid corpus invalidum reddit; secundò, quæcunque vetant ne exhalantia atque absorbentia munera sua rite perficiant.

Omnibus, qui hujus mali vestigia attentis oculis lustraverunt, notum est inter ipsius potestati subditos pulchram et dulcem mulierem non raro inveniri. Nec mirum est; nam formâ insigni quidem sed debili præditâ fidelis hominis socia aggredienti morbo non multum obsistit.

Ast corpus infirmum sola causa non est: aliæ sunt quæ fortissimos aliquando viros huic tristi morbo subjicere possunt. Spectatis enim ipsi subditis, nobis videre licet ascitis dolore vexatos et militem, cujus prima ætas in campo Martis fuit peracta, et ducem, qui magnis exercitibus in patriæ hostes sæpe irruit; atque illum, qui sævam spernens tempestatem, viam per altum tetendit.

Turpes animi affectus, quibus totius vires corporis franguntur, crebrò ascitem parire nemo negat. Quam ob rem pravis deditas criminibus, virque libidine fervens hoc morbo vexantur.

Nemo autem sæpiùs eo torqueter quàm ille qui sitim fructibus vitis levat. Vinum enim nimis sumptum enervat, et plurimis malis viam aperit.

Nec ille qui segnem ducit vitam tutior est. Imo, vir vitam otio agens, spretis mensâ frugali ac labore incolæ ruris, clypeum ab sese abjicit, et, sicut bellator armis carens, velocem citò sentit ascitis sagittam.

Dum multi homines agnoscere coguntur in semetipsis hunc morbum ab eis sceleribus ortum duxisse, quæ hominis decorem vitiant, ipsumque sævis indomitisque feris similem reddunt; non absunt plurimi quos in mentem tempus præteritum revocare haud ita pœnitet. Hi possunt saltem dolorem lenire, scientes se semper virtutem coluisse, ac officiis Deo, patriæ et sibimetipsis debitis recte functos fuisse.

Alteros morbos vetustos præsertim abdominis viscerum hoc malum insequi nos docent multi viri summâ peritiâ. Nulli tamen morbo sæpiùs quàm peritonitî ascites supervenit.

Causis, quas dixi, quoque sunt annectenda omnia,

quæ sanguini ad dextrum cordis latus redeunti obviam veniunt. Nobis igitur licet valvulas cordis in ossa conversas, tumores vasa sanguinem vehentia prementes, atque uterum gravidum inter causas ponere, quæ magnâ vi pollent in morbo ciendo.

Quibus causis jam allatis aquam accensere quosdam delectat. Dicunt enim qui sese affatim aquâ replent, illos hydrope pati. Idem etiam cecinisse dulcis poeta videtur:

"Crescit indulgens sibi dirus hydrops."

De Signis. Incipiente hoc malo, æger fit segnis atque ignavus, nec mentem tam avide dat rebus, quas sequi illum multum juvabat; escam quâ antea epulabatur non petit, aut eam cujusdam cari manu amici oblatam respuit. Cutis ipsius, ut terra cui imber denegatur, arida et dura evenit; intestina sunt pigra; renes quoque munus male perficientes minorem quam decet urinam emittunt.

Morbo autem ingravescente, crura et femora atque abdomen tument; vultui, suo nitore amisso, pallor inest; arteriæ debili atque abnormi ictu pulsant, et sitis insatiabilis adest. Miserrimus æger siccâ tussi angitur, atque ab imo pectore difficile spirat. Ad hæc, gravissima patitur quibus finem dari ante obitum sperare vix audet. Illi dies est molesta; nec

benigna nox, ab aliis optata, illi secum quid auxilii confert. Quis totius angorem noctis, quis fando explicet? aut possit verbis æquare laborem?

Quid autem de molli fœminâ dicam? Extrema multos per menses passa mulier nuper formosa altum corde dolorem premere nequit, sed tristis et lacrymis oculos suffusa, et duplices tendens ad sidera palmas, mortem passu ignavo gradientem his verbis alloquitur: "O, quæ res hominumque mulierumque æternis regis imperiis, quid ego infelix in te committere tantum? Quid ipse potui, cui tot mala perpessæ nunc placido compostæ fine quiescere denegas? Festina, lata mors, nam quæ tam sera moratur segnities? aliæ morte veloci rapiuntur; in me, in me solam tuæ sagittæ segnius cadunt.

Diagnosis. Adeò asciti similes nonnulli sunt morbi, ut acri judicio medicos plerumque fefellerint. Nobis tamen signa haud absunt quibus ab aliis morbis asciten dignosci potest. Aere in abdomine retento aliqui medici fuerunt decepti, ægrum putantes ascitis cruciatibus affici. Quos verò inter morbos non pauca discrimina sunt. Priore enim in morbo sitis abest, renes suis rite funguntur officiis, flatu expulso dolor mollitur, et denique tactus ventum

adesse nos certiores facit.

Ad dignoscendum inter ascitem hydropemque ovarii multa sunt annotanda; scilicet, modus quo morbus incepit, temporis spatium quo permansit, et corporis pars quâ primò apparuit.

Multis quoque haud levem difficultatem mulier gravida præbuit. Nam, mirabile dictu! illam parituram funestis ascitis premi penis viri scientiâ insignes nonnunquam crediderunt. Hic etiam signis potimur, quibus falli vix possumus. Tempore, quo fœta est mulier, menses cessant; uteri cervix fit brevior, mammæ tumescunt; nausea veniente die ipsa opprimitur, et fœtum in utero moventem interdum percipit. Si tamen remaneat dubium, brevi tantum tempore viget; novem enim mensibus elapsis, parvus puer videre incipit.

<u>De Remediis</u>. Licet in annalibus medicis plurima esse exempla, in quibus ad sanitatem ægri abdominis hydrope cruciati fuerunt restituti, nemo neget; attamen quoque concedatur nequicquam plerumque hunc in lethalem hominis hostem arma nos tollere: Etiamsi summis nostris conatibus haud raro hoc malum arridcat, admodum, tamen,

crudele atque inhumanum foret non adhibere quidquid auxilii ars medicinæ præstare potest. Inde oportet me saltem breviter loqui de præcipuis hujus morbi medendi consiliis.

Eadem singulis in casibus medicamina non esse adhibenda ab omnibus concedetur.

Si morbus ortum corpori nimis debili debere videtur, remedia nostra danda sunt vires restituendi causâ, dum potentiora quàm cautissimè sunt evitanda.

Alteram verò agendi viam nos medici docent, si vasorum plenitudo, ac majores cordis vires morbo ortum dederint. Quo rerum statu, sanguis copiosè abstrahi debet.

Ad malum amoliendum cathartica multum conferre fere omnes medici unâ voce conclamant. Hi quoque potentiora, mitioribus relictis, semper eligunt.

Nec minore laude diuretica extollunt. Quamvis omnia istius classis remedia faustissimo eventu adhibita fuerint, attamen reliquis potassæ nitras palmam præripere videtur. Alii autem medici fide digni scillam iisdem virtutibus gaudere experti sunt.

Multum conferri auxilii hoc in morbo sanando medicamentis sudorem elicientibus non pauci putant.

Nec absunt qui per vomitum proritantes morbi vires sæpe minuere dicunt.

Si autem omnia, hactenus prodita, mali viribus imparia sint, ad Chirurgi solertis manum, velut spem ultimam, nobis est fugiendum. Bene —

1837

An

Inaugural Essay

On

Spinal Irritation

Addressed to the

Medical Faculty

Of the

University of Maryland

For the Degree of

Doctor of Medicine

By Benjn Edelen

The number and variety of forms assumed by the diseases of the vertebral column and the bundle of nerves it encloses are too great to admit of their consideration in detail consistently with the the purpose and limits of the present essay. It is proposed therefore to confine the remarks which follow more particularly to that form of this disease usually denominated Spinal Irritation. It may not be improper however to observe in this place, that the general remedial agents are the same in the whole of this class of diseases. It might with reason be deemed superfluous to enter into a minute anatomical description of the spine. It is perhaps enough to say, that it is divided into twenty four parts called vertebræ, seven cervical, twelve dorsal and five lumbar varing in length breadth and direction: And that their form structure and relation to each other are such as to admit of considerable extent of motion in almost every direction. It is the seat of every movement of the trunk, and transmits its weight

to the pelvis. Passing through it, is a canal connected by a strong ligamentous sheath, which extends its entire length and below it to the coccygeal extremity. Within this canal, protected by the bony structure surrounding it lies the spinal marrow and the membranes which envelope it. The membranes are the continuation of those which envelope the brain the dura mater, pia mater, and the intervening arachnoid, though the second of these membranes differs so widely in its structure from the pia mater of the brain according to Cloquet, that it should receive another name. He therefore calls it the proper membrane of the spinal marrow. There are also in addition to these membranes two bands on each side of the spinal cord immediately over the pia mater or membrane proper and between the anterior and posterior roots of the spinal nerves. The marrow properly so called presents to the eye of the anatomical enquirer an aspect scara-

ly distinguishable from that of the cerebral substance. It is composed of a bundle of nerves extending as already intimated from the occipital foramen to the os coccygis distributing in its descent thirty different branches, seven cervical, twelve dorsal, five lumbar, and six sacral. These branches or nerves make their exit through the intervertebral foramina, and derive their names from the portions of the spine in which they have their origin. The function of these nerves are more essential to the purpose of the present essay than the anatomical character of the cord from which they proceed, inasmuch as a knowledge of them will enable us to anticipate the symtoms resulting from their diseased condition. Their principal office appears to be that of communicating motion and sensation usually embraced under the head of touch or tact. The experiments of Sir Charles Bell repeated with a similar result by Magendie justify the inference that it is the function of the posterior dorsal portion of the spinal

nerves to communicate sensibility, and of the anterior or abdominal portion to convey the influence essential to motion. Some doubt, it is true, is thrown upon this theory by the observations of Dr Spurzheim, though it is not inconsistent even with these, to ascribe to the nerves respectively, as their principal function what Sir Charles considers their exclusive office. Important and essential to health as the due performance of these functions are the necessity of an acquaintance with the diseases of the organ become much more obvious, when it is recollected that there exists an intimate connection between it and all the viscera of the abdomen and thorax through the intervention of the great sympathetic and its ganglia. With this nerve those of the spine unite at a very short distance from the intervertebral foramina. A communication is thus established with all the involuntary organs. It may be inferred from the complicated structure

mechanism, and the office of the vertebral column and from the limited circulation of the spinal marrow arising from its secluded position and relative location, that a considerable injury inflicted upon either would result in a disease of comparitively protracted duration if not wholy unmanageble. Its extent and character however will depend for the most part upon the nature, violence, and location of the injury modified however in no small degree by the state of health at the time it is received and still more by the constitutional peculiarities. Causes — A specific enumeration of all the exciting causes of spinal Irritation is presumed unnecessary. With a single exception and that perhaps only an apparent one, all that are distinctly appreciable may be reduced under three heads; 1st a shock or concussion from a force in a direction angular or longitudinal to the vertebral column: 2ly Pressure upon the spinal marrow by dislocation or fracture: and

3ly by laceration or local derangement of the parts by the last mentioned species of violence. The facts of one case, (that constituting the exception above alluded to) have been reported to the writer of this dissertation, which render it somewhat probable that this complaint may proceed from an attack of acute rheumatism. In this case as in all others the rheumatism was brought on by exposure to cold. It first invaded the lower extremities and gradually ascended to the spine, there assuming its habitation, it spread around its baleful influence to every part between which and its seat there existed any connection. Inasmuch however as the pains in the legs, the contraction and rigidity of the muscles which characterised the case referred to, are features common to both diseases, it is quite possible that the supposed cause was but one of the first effects of the complaint, the cold acting upon a susceptibility heightened by the

deranged condition of the region from which the nerves of the part affected, derived their origin.— Injuries of each of the three kinds above enumerated are most frequently the result of mechanical force coming in contact with the spine in an angular direction whether from blows or falls. Those of the first class however (shocks or concussions) may be occasioned by the application of the force longitudinally either to the lower or upper extremity. Jumping from a great height and lodging on the feet, or a fall on the floor or ground in which the momentum of the descent and weight of the body be sustained by the os coccygis or an ascent up steps in which the head is brought with great ~~[illegible]~~ force against an immoveable beam or joist are causes belonging to this class.— Individuals of a scrofulous diathesis are more subject to this disease, inasmuch as a less violent injury is sufficient to develope inflamation, and because

the existing predisposition of the system to irritation, may be easily concentrated upon any point, by the action of an exciting cause. Indeed the complaint in question, not unfrequently supervenes upon a diathesis of this character without the possibility of tracing it to any immediate or external agent. When the disease appears under these circumstances it may be expected to resist with most obstinacy the efforts of the Physician or Surgeon to mitigate or remove it. In such cases the vascularity of the parts is greatly increased and this condition is frequently communicated to, and continues in the adjacent bony structure until it is deprived of vitality. — Symptoms — These are as numerous and varied as the functions of the part affected are important and its connections extensive. As the principal office of this organ is to communicate sensation and motion we might anticipate from its derangement, an impe-

fect exhibition of these phenomena of life. In this instance observation confirms the inductions of theory. The writer of this essay however is not enabled by any thing which has come within the range of his own limited experience, to say that the loss of sensation is an usual concomitant of this disease. Indeed if he might rely upon his own observations, and upon reports unquestionably authentic, he would be strongly disposed to suspect that a material diminution of tactual sensibility is one of its rarest attendants. One of the first symptoms of spinal irritation is a feeling of languor and general debility pervading the whole frame but felt more distinctly in the lower extremities and the muscles which keep the body in an erect position, inducing an aversion to locomotion and a disposition to assume or retain a recumbent posture. If the disease is not arrested at this stage which it rarely is in consequence

of the patient's and not unfrequently the Physician's ignorance of its seat and nature, these symptoms are followed by weakness in the digestive organs and torpor of the bowels. The interval however between these two inaccurately defined stages is sometimes considerable amounting in some instances to years. The duration of this period depends partly upon the degree of irritation and partly upon the distance of the seat of the affliction from the upper or lower extremity of the spine. This complaint even in the mild form here supposed is not unfrequently attended with distressing uneasiness in the loins about the region of the kidneys extending occasionally from thence to the feet. Of this portion of the frame the knees most frequently suffer. These may be considered almost infallible symptoms of the location and character of the disease. The inferences to which they lead will generally, perhaps always, be confirmed by an examination

of the exterior of the spine. On the application of pressure the patient will evince a greater degree of sensibility in part if not in the whole of the column than is natural — Concussions of sufficient violence to produce inflamation of the spinal cord will generally be followed by a temporary suspension of animation. The recovery from this state may be so complete apparently as to remove all apprehension of a serious result. Under this impression the patient continues to promote the inflamation by the muscular exertion which his ordinary avocations may require and by his want of care and caution in other respects, until he is suddenly and entirely prostrated, whilst indulging the illusions of perfect security. This prostration is accompanied with rigors resembling those produced by an ague and a most distressing sense of debility or faintness impressing the patient irresistibly with the belief that he is rapidly sinking into his grave. Indeed in some of the more aggravated forms

of the disease all the phenomina of vitality repeatedly disappear. This grade is attended with an habitually depressed state of the nervous system and an enfeebled circulation and as might be expected a great deficiency of animal warmth. The coldness resulting from this condition of the nerves and circulating system is more apparent in the lower extremities, and particularly in the knees. In other cases again the symptoms vary considerably from those above detailed especially in the incipient stage of the disease. According to Mafford, Treatise on the Spine P. 69, in concussions of the spine the patient immediately after the injury becomes almost lifeless - a marble coldness pervades the whole frame but more particularly the paralysed limbs. He cannot lie in any other position than on his back; - His pulse is ~~[illegible]~~ weak and fattering; and he is frequently almost unconscious of what is passing around him. In fact the whole frame is in a state of collapse, in this

situation he remains for a few hours when re-
action gradually commences. The warmth of the
body returns until it amounts to a state of fever.
The pulse rises becoming quick hard and full,
the tongue is furred and great thirst is felt. It
is probable that the symptoms here discribed
by Mr Stafford are rarely consequent upon a con-
cussion of the spine. In such cases the system
will almost always be found in a state di-
rectly opposed to that of fever. The activity of
the ~~pulse~~ circulation will be reduced below
the standard of health and the nervous energy
greatly impaired. The most intractable form
of this disease is that in which it supervenes
upon a strumous diathesis immediately excited
by a fracture or concussion or by a caries of some
of the vertebræ, attended with a paralysis of the
lower extremities. When the laceration or pressure
produced by the fracture, or the shock by the con-
cussion, has been sufficiently great to paralyze
the portion of the frame below the seat of the injury

the usual symptoms will wear a more alarming aspect. The bladder is involved in the paralysis, is sometimes unable to retain and sometimes to discharge its contents. If the urine is not removed decomposition takes place and a consequent corrosion of the mucous membrane of this organ which hastens the dissolution of of the sufferer. This organ is supplied with nerves from the third and fourth sacral. Its prostration therefore must arise from a deficiency of energy in these nerves. A torpor of the bowels occurs perhaps, still more frequently. Its consequence is sometimes only constipation, and sometimes the more serious one of inflamation and even disorganization, the fæces, retained by reason of the diminished action of the intestines, undergoing decomposition. It is probable that the power of peristaltic motion is conveyed to the intestines by the anterior branches of the spinal chord these being the nerves of motion. If this be not the case the torpor so fre-

quently appearing in this disease, must result from the connection between the bowels and spinal marrow established through the medium of the great sympathetic. These symptoms in the higher grades of the disease is generally accompanied by a tightness across the breast and stomach, producing in this organ a most distressing sense of tension or pressure resembling that which characterises a spasmodic affection. Pains also occur in the abdominal parietes, which may be traced from the median line to the spine in lines or bands of various widths. These pains seem to be communicated to the intestines increasing the irritability, which they derive from other sources. — The prognosis of this complaint must depend upon the violence of the injury, the part upon which it is received or where the disease is seated, and the peculiar idiathesis of the patient. If the injury be inflicted above the third cervical vertebra and with sufficient

violence to paralyse the phrenic nerve and other organs of respiration death from asphyxia must inevitably ensue. If the force be applied below the origin of this nerve, the consequence will not necessarily be fatal. The result will depend partly upon its proximity to this point and partly upon the severity of the injury. — Treatment. When a concussion of the spinal marrow has been sustained sufficiently severe to produce prostration or faintness, we should in the first instance resort to stimulants such as wine cam. amonia opium &c. After reaction has taken place the administration of tonics such as quinine peruvian bark &c will prove beneficial. If symptoms of inflamation supervene entire relief will frequently be effected by the application of blisters along the course of the spine on each side. This superficial irritation should be kept up as long as there remains any evidence of internal inflamation.

Should this be insufficient an eruption on the same surface produced by the action of tart. ant. is a more permanent and frequently a more effectual counterirritant. There are two modes of applying the ointment prepared with this article, the one as a plaster and the other by friction ~~by~~ with the hand. The latter method is much the better, both because the action of the ointment is more prompt and the degree of irritation may be regulated with more facility: for this may raised to a point entirely beyond the power of human insurance. When however the irritation has reached this point it may readily be mitigated or indeed entirely subdued by the application of an ointment made of the acetate of lead rubbed in lard. When these remedies fail surgeons generally resort to setons or issues. The latter are usually preferred as being less painful more cleanly and more easily managed. These should be established on each side of the spine near the part

most affected. According to the practice of different surgeons the size may vary from three quarters of an inch to four inches in length and from a half to three quarters of an inch in breadth. After determining the size and place of the issue, the surrounding parts should be carefully protected by placing upon it a piece of adhesive plaster having previously cut in it a hole of the dimensions it is proposed to make the issue. Caustic Potash should then be applied to the part which is to be converted into an eschar until it assumes a dull brown colour; The caustic should then be washed off and a poultice applied which may be renewed twice or thrice a day or even oftener until the eschar can be removed. When this has been done peas ought to be laid in the issue and confined first by adhesive plaster and then by a compress made of pasteboard or sheet lead. The peas should be renewed every day in order to keep up the irritation. Even this frequency of renewal is often insuffi-

cient to prevent the issues from healing. Under these circumstances it becomes necessary to resort to the same means by which they were established. In conjunction with this species of counter irritation local bleeding by cupping and leeching to the amount of four or five ounces, repeated twice or thrice a week has been sometimes practiced. When the inflamation is of recent origin this mode of treatment must be advantageous. But its beneficial tendency is not so obvious where the disease has assumed a chronic character. — Cases have occured, (some within the observation of the writer of this essay) which resisted all of the above methods of treatment and which yielded readily to the moxa. There are several methods of applying this revellent, which may be ascertained by refering to Baron Larey, Thomas Cooper and other authors who speak of this remedy. Some authors recommend a recumbent posture as proper under every aspect in

which this disease may present itself. Whether this be judicious treatment under all circumstances is by no means unquestionable. In the early stage of this affection when the injury is recent or the inflamation has been but a short time developed and the reparatory power of the system not yet materially impaired, rest in a horizontal position, may prove beneficial; and when there is a caries of the vertebra it becomes absolutely necessary. But where there is no caries and the disease has been of long continuance and the recuperative energy of the system has been reduced by protracted inactivity, moderate exercise graduated by the strength of the patient, will be highly conducive to his general health and to the amelioration of the local affection. These objections apply, with equal force and for the same reasons to the unqualified prescription of a farinaceous diet. The prohibition of animal food can only be necessary

when the pulse indicates febrile action. A generous diet consisting of at least one meal of meat a day and that of the most nutritious kind, such as beef mutton &c is better adapted to the low and depressed state of the system which as has already been said almost invariably characterises this afflicting malady. In some cases the use of mercury even so far as to produce ptyalism has been attended with advantage. But it is the concurrent testimony of many authors that where there is any indication of a scrofulous habit the exhibition of this medicine except for alterative purposes could not fail to prove deleterious. It is deemed almost needless to advert to the necessity of paying strict attention to the general health of the patient. The torpid state of the bowels will generally require the aid of cathartics more or less active — But drastic purgatives should be avoided

as they contribute to increase the irritability of the stomach and upper part of the bowels which is sometimes very great even whilst the lower part is in a state of semi-paralysis. Friction upon the back and extremities will be found useful, by promoting the healthy action of the capilary system.

The number

Inaugural Dissertation

on

Malaria

Presented to the Trustees and

Medical Faculty

of the

University of Maryland

by

Charles H. Stokes

of Maryland

for the degree of

M.D.

An Inaugural Dissertation
on Mercury.

Presented to the Trustees and
Medical Faculty
of the
University of Maryland
by
Charles H. Robertson
a candidate for graduation

Mercury

There is perhaps no article of the Materia Medica which deserves to have its properties and application more closely investigated, than the one under consideration. The most superficial observer cannot avoid noticing, that by many it is used in almost every disease to which the human frame is subject. We find it classed by different writers under the heads of cathartics, tonics, sialogogues anthelmintics, diaphoretics, sorbefacients, alteratives, revulsives, excitants &c. It has also the property of rendering

water purgative, & anthelmintick, without losing any of its weight (according to Foderé).

It is intended to make some remarks upon this article and its preparations without any particular regard to order.

In the form of Calomel as a cathartick, it possesses peculiar advantages, appearing to aid the operation of other cathartics, without producing any additional irritation; it is valuable from the small bulk of it required for a dose, for its having no nauseous taste

or smell, which is no small consideration, in cases where children are concerned and even sometimes those of larger growth. According to Dr. Paris, it is a sort of pilot which he calls Dirigens, when combined with other medicines, not only directing them where to exercise their peculiar virtues, but actually producing the same effects, as the remedies with which they are in combination. For with diuretics, he says it becomes diuretick, mixed with diaphoretics, diaphoretick

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&c. An opinion long prevailed among physicians, that to every ailment of the human frame there was some peculiar remedy. An opinion which we might suppose was still held from the language made use of by some, for we are informed that mercury will cure Syphilis in all its forms.

When we know that this disease can be cured without the use of mercury, might we not with equal propriety say that cold water, or Barley water or Sarsaparilla (the virtues of

which are probably equal to those of Barley Water) would also cure it in all its forms. It seems to act chiefly by irritating the mucous membrane of the duodenum.

The liver is probably acted upon in consequence of the irritation being carried along the continuous mucous membrane which penetrates its inmost recesses and thereby causing an increased secretion of bile. We cannot suppose the mercury can act specifically upon the liver without entering the circulation, which is supposed not to take

place.

when it acts as a purgative.

As regards the dose, much difference of opinion prevails. From three to ten grains frequently are sufficient to produce free catharsis while sometimes ten times the quantity has no such effect whatever. This has been accounted for, by supposing that the increased quantity promotes absorption and thereby interferes with its cathartick effect.

Where the object of the prac-

-titioner is to produce catharsis should he not be cautious in administering large or frequently repeated doses, lest sudden absorption should take place, and consequences, ensue very different from what were expected; and would not the use of the lancet or of anti-monials not only aid in favouring absorption, but also when given in small doses, promote its action as a purgative.

It would appear that this article has been administered

in our Western States, in the enormous doses of 150 grains and even by the teaspoonful, and as was thought with advantage — in bilious and typhus fevers and in Cholera Maligna.

It is now well understood that if any erethism exist in the intestinal canal, absorption is embarassed. The teaspoonful of calomel is taken into the stomach, and there remains as so much inert matter, or passes through

the bowels — unchanged ——

In a recent work on Therapeutics, it is stated that after bleeding, absorption is active, and that " such appears to be the effect of a very large dose, even when blood letting has not been premised; whilst a small dose irritates — without there being the stimulus of quantity, to induce its absorption — and has a cathartic agency. In this way a large dose of calomel may

defeat the object of the prescriber, if he wishes to produce catharsis, whilst by undergoing absorption and coming in contact with every organ, it may excite a new action in the whole secretory System. Even in this unusual quantity, it is, therefore, altogether harmless. The superfluous amount being of course a waste of the article"

From the remarks above copied verbatim it is intimated that when an

enormous dose of calomel has
been taken to produce catharsis,
and the object of the practitioner
defeated by absorption taking
place, that although it comes
in contact with every organ and
excites a new action in the
whole secretory system, even
in this unusual quantity, therefore
it is altogether harmless, being
only a waste of the article.
It appears somewhat difficult
to conceive how an agent
producing such effects can
be considered harmless, one

would suppose, it might be productive of much mischief, and also of benefit.

The Blue Pill is another form under which Mercury is sometimes used as a purgative, but chiefly in combination. The most recent opinion entertained, is that the mercury in this preparation is merely in a state of mechanical division; a small proportion being converted into the Black or Protoxide.

It is a disputed point which

is the efficient agent in this preparation, the uncombined metal or its oxide—

Mercury as a Sialogogue.

It is generally admitted, that in most diseases ptyalism is unnecessary. However, it is still recommended in some complaints where the system is required to be brought speedily under its influence, especially in diseases of the fibrous tunics of the eye. The salivation, perhaps, is of no further use, than as a

certain evidence that the remedy has exerted its full influence upon the constitution.

Mercury no doubt is of great service as a revellent. many of the benefits derived from it, in the treatment of disease may be accounted for on the principle of revulsion. From its peculiar physical properties it seems to pervade every tissue of the human system producing a general excitement which by its revulsive effect breaks in upon any morbid action that is going on.

When the System becomes fully under the influence of Mercurial preparations, we may suppose they have undergone decomposition, for if a polished gold surface is applied to the Skin, it becomes coated with Quicksilver — Would not an expedient of this kind be of use when salivation was excessive; or does the mercury leave the system in the form of vapour, when ptyalism commences, or does it by its continuance in the system keep up the irritation & thereby cause the salivation to continue. Mercury may be speedily introduced into the System externally, as

well as internally. From the occasional unpleasant consequences which result, much prejudice has been excited against it, and against Calomel doctors. A prejudice kept up and fostered by Quacks using it themselves, and by those who are not willing to trust to the intelligence and veracity of those who for years, have witnessed and tried its beneficial effects, and who could have had no motive to disguise the truth. The benefits conferred upon mankind, by the introduction of Calomel as a remedial agent, says a distinguished individual are equal to those which have resulted from the use of the Steam Engine. In which opinion, the Writer of this fully coincides.

An Inaugural Dissertation

On

Remittent Fever,

Submitted to

The Trustees, and Medical Faculty,

Of the

University of Maryland,

For the

Degree of Doctor of Medicine,

By

John A. R. Benson.

1837.

Preface

It is now a clearly established point that Fever of a strictly intermittent type cannot be found to exist; for if we examine the patient laboring under this disease in a state of apparent apyrexia we will find his countenance presenting a dejected and deadly appearance, if we consult the pulse the index of the system we will find that it imparts an unhealthy sensation to the finger, if we view the tongue it will be furred, if enquire into the feelings of the patient, we will discover his utter dislike to mental as well as corporeal employment, in fine there is every symptom of the disease though not so manifest. Rejecting the term intermittent, I have substituted that of Remittent for the subject of my dissertation

Febris Remittens

Before the science of medicine had yet spread its luminous rays upon the world, when ignorance and scepticism walked with predominant sway. Anterior to the civilization of Greece when darkness and barbarity enveloped that mighty portion of country, and prior to the rising Sun of the immortal Hippocrates, when medicine had not yet assumed the form of a science, but remained a rude and dreary waste containing nothing to engage the speculative mind of man, Fever was a desease dreaded by the world, A desease so formidable in its appearance, so calamitous in its consequences, it is to be reasonably supposed would necessarily call forth for the deepest researches of the most profoundly learned men, and such has been the case, men of every age, of every clime, and of every nation, have been most sedulously engaged in attempting to arrive at truth in regard to the essential nature of Fever. Yea: Since the time of Hippocrates the Father of the medical science whose name has been handed down from age to age, and whose fame shines brighter and brighter the farther we recede, and who will continue to be held in glorious remem-

brance till time shall be no more, Men who have shone with brilliancy in the Constellation of Eminence, Men who astounded the world with the comprehensiveness of their minds and who have dived deep into the hidden recesses of nature and unveiled some most dark and enigmatical mysteries, these are they who have been most sedulous in their attempts to explain the nature of Fever. But what has been the consequence? What has been the result of their numerous investigations? "Line upon line has been written, theory upon theory has been promulgated each has had its hour to strut upon the stage and its votaries to yield it faith, but the stream of time has hitherto carried away all these insubstantial, though often highly wrought fabrics." So that the subject yet remains in the utmost darkness and in the most profound obscurity.

The most ancient theory of Fever was that of Hippocrates, he did not view it as a devastating malady, he did think it an injurious occupant of the system tending to produce disease and death. but directly the contrary, he esteemed it a salutary effort of nature, endeavoring to throw off peccant matter lodged within the system, and wonderful

to tell that this idea should have suggested itself to the comprehensive mind of its author previous to the discovery of exanthematous affections, which would indeed appear to validate it in a degree, but reason discountenances it, observation forbids and refutation is needless.

But the illustrious and very brilliant mind of Broussais has set forth the opinion that all fevers originate in the mucous membrane of the alimentary canal, that it is inflammation of this membrane, that is the primary source of Fever, that it is in the words of Bichat pons et origo of febrile phenomena. But instead of inflammation of the stomach and intestines being the cause if we scrutinize it carefully, if we examine the formation, progress, and termination, of Fever, we will be enabled to find that the Gastro-Enteritis, is rather the effect than the cause of Fever, febrile phenomena, and lies secondary to the Fever.

But what was the opinion of Cullen the shining light and brilliant star of his era and the much admired man of every age? It was that Fever was dependant on spasm of the blood vessels, But Dr Wilson Philip denies the spasm of the blood-vessels, and says that its distension and consequent debility of the capillaries. Thus though numerous have been the opinions advanced in regard to its nature, though so many have consumed their time and talents in its investigation, and though the opinions they have advanced have been as diversified as have been the characters from they emenated, we have not yet arrived at any positive conclusion as to its real nature. It is apparent however that there is primarily a diminished energy of the nervous system succeeded by an increased action of the heart and arteries, that there is diminished energy of the brain is manifest from the languor, lassitude, loss of appetite and to the increased flow of blood we ascribe

headache, restlessness, delirium Etc. But in what manner they are brought to act with each other is difficult to explain - tis concealed by the many obscure points of nature, but tis endeavored to be explained by the term reaction which is itself a hidden explanation, cloaked in ignorance, In any attempt to explain the nature of Fever I am always inclined to adhere to the golden maxim of Sir G. Hordyce." Confess ignorance as to its real nature and say that it is a disease of the whole system, that it affects the head, the trunk of the body, and the extremities, that it affects the circulation, absorption and the nervous system It affects the body and likewise the mind. It affects the skin, the muscular fibre, and the membranes. It is therefore in every sense a disease of the whole system.

If Fever have a local "origen habitation or a name,, it is in the whole body, and not as some would contend in a particular organ or organs.

These cerebral, spinal, and gastric attachments, strongly resemble the love-infatuations of early life, which commence in misconception, are perpetuated in folly, and clung to with an obstinacy proportionate to the worthlessness of the object. What then is Fever? we cannot tell. What is its exciting is said to be miasm - but we know it only from its effects - we cannot seize with all the aid of science this subtle something - we cannot tell in what manner it is produced though so numerous have been the speculations upon the subject. In fine all we know about the subject is that its Fever. And it is that which should engage more scrupulous investigation, for it is it that the practitioner watches with the most careful eye. It is it that he either endeavors to combat, or expects its appearance. It is it by which he measures the danger to which his fellow man is exposed, and without which a prognosis is easily formed.

All Fevers have been divided into Idiopathic and Symptomatic, by the former is to be understood those that arise from no perceptible cause, that depend upon no local irritation or fixed inflammation, but are produced by something acting throughout the system by perverting primarily the nerves and deranging function after function, untill the system is thrown into a morbid condition and Fever is the result. By the latter we mean those fevers that arise from some cause perceptible, that follow the infliction of injuries that depend upon the morbid condition of some organ and are the symptoms of those affections. They have again been subdivided into three lesser varieties viz Intermittent, Remittent and Continued but as I have previously endeavored to deny the existence of a fever of a strictly intermittent type, we will take as a division only the Remittent and Continued It may be said that Remittent Fever is becoming a little theme but when we take a survey of human maladies, when we look around us and see

its devastating effects, when we view the poor sufferer attacked with this disease, and see his cold dejected countenance, his dark and bilious eye his ingorge appearance, his furrowed brow, when we hear his shiverings, and his doleful moans, we will be ready to admit that something may yet be said to benefit mankind in relation to this direful malady.

Symptoms. An attack of fever is characterized by a sense of lassitude, and weakness, a disposition to yawn and to stretch the extremities, this is soon followed by a strong sensation of coolness not unfrequently arising to such a degree as to induce rigors the surface is cold, the pulse quick, frequent and weak the patient complaining of thirst, the urine pale and without sediment, this state of things gradually subside, and are followed by slight flushes of heat passing over the body, till at last the artery that just now could scarcely be felt with the most accurate sense of touch, which had in its fine beatings the very symptoms of death, bursts out with

with the most heavy throbs, strong and frequent the countenance that just before exhibited such a cadaverous appearance, is full, flushed, and florid there is a throbbing of the temporall arteries, Cephalalgia pain in the back and extremities, urine deep colored the breathing oppressed, these are gradually followed by an abatement, the pulse becomes soft, the breathing more regular and free, the urine is copious, and deposits on standing a lateritious sediment, a copious perspiration takes place and the symptoms subside leaving the patient in an apparent apyrexia. thus it is that the attack or paroxysm of fever may be divided into the cold, the hot and the sweating stage the duration of each depending entirely on the intensity of the agent, it may run its course in a few hours and when such is the case, tis slight, tis an exceedingly diluted state of the air which gives rise to it, so diluted as to render its influence, very weak on the animal system.

Prognosis. In strong and robust constitutions the prognosis is more favorable, than in low and debilitated

habits who are frequently unable to bear the reaction of the cold stage, and fatal congestion is the consequence A scaly eruption about the mouth is a favorable sign when the digestive functions are in a healthy state the disease may be easily cured, delirium accompanied with dyspnea and cough is an unfavorable sign colliquative discharges and bloody urine is an unfavorable sign, enlargements of the spleen is also to be esteemed as an unfortunate symptom arising from a too early employment of tonics, or from the inattention to sufficiently depletive means. Urine of a dark color, and depositing a brownish sediment is to be regarded as an unfavorable symptom, blotches over the skin, partial sweats and all such things are unfavorable, a lengthening of the prawsyxm, debility arising from any cause, as drunkenness, debilitating chronic affections are all symptoms to be deplored, great depression of spirits, anxiety & loss of vision are signs that are unfavorable, a torpid state of the bowels giving rise to hardness of the abdomen is also unfavorable.

Cause. When we cast our eyes around us and behold the wonderful works of nature, when we view the earth a wide and extended plain, spread out with the most luxuriant vegetation, and when we behold the descending showers and moistening dews of Heaven falling upon this vegetation, producing a greater luxuriance for the sustenance of man and other creatures of God we will be ready to admire the beneficence of Providence, but when we reflect that this vegetation too must decay, that there is a time appointed to all things to die, and that by its death it brings things with it disagreeable and noxious to the system of man, that with its decay it sends forth an effluvium, which has received the name of Malaria given it by the French, and this malaria coming in contact with man produces disease and death. The term Marsh miasm by which it is also known is an inappropriate one, for wherever we find vegetation, wherever there is moisture and heat to assist the putrefaction of this vegetation, there fever may be found to exist = The effluvium then arising from this putrefaction

is the source of Fever. But what is its nature? Is it a different compound from the atmosphere? What is its chemical qualities? Chemistry with all her synthetical and analytical powers has never been able to give us the true nature of this deleterious agent. Numerous have been the opinions advanced in regard to its modus operandi in producing disease, numerous have been the avenues through which it has had to pass to affect the system of man, but tis now the received and justly received opinion that tis inspired, and coming in contact with the blood effects its injurious tendency, in what manner we know not, by what process tis difficult to satisfactorily conclude. Besides this the predisposing causes are such as tend to debilitate the system generally, such as a weak and innutritious state of the assimilative functions, exposure to dampness, low and unwholesome diet, in fine any thing that tends to interrupt the animal machine, any thing that affects the most minute organ of which it is composed, and interfering with the duly balanced state of salubrity will aid in the production of the disease

Treatment. The treatment of Remittent Fever, is different in the different stages, and among different different writers While some will advise us to treat the protracted cold stage with all the most diffusible stimuli, with which nature has abundantly supplied us, others and with due veneration and respect may I be permitted to mention, the almost more than mortal Mackintosh, and the able illustrious and highly gifted Pottie, whose medical skill cannot be questioned, would direct us in the most solemn terms, to make the most energetic use of the Lancet. And why it may be ask may we not abstract blood in the cold stage? Where is the rigorous state of the body that just now existed? What is the cause of the depression of the pulse that just now was so strong and active? Where is the blood that just now flowed on the surface? Has there been any abstraction to cause this change, this conspicuous change? this coldness and pallid condition of the surface? No: the same quantity of the vital fluid is now in the system, it has only retreated from the circumference to the centre, and is then overloading the portal circle, and causing all this prostration, which is deceitful in the extreme, the vessels within are in a

congested state. they are overburdened with their more than natural quantity, And why may we not relieve them with the lancet, by drawing off a portion of that fluid which is too copious? Upon what philosophical principles can we act than to unload an overburthened organ, Tis rational, and a fair and philosophic deduction from pathological premises By drawing a portion of blood which at first appears to be reluctant on account of the congestion to flow, but as the organ is relieved it feels the invigorating impression and the blood flows with a full and vigorous stream, and the pulse becomes more active, the reaction is brought about and the disease is either arrested or the symptoms milder in their form and more easily cured, If this be the benefit arising from bleeding in the cold stage and that is who will attempt to deny? Tis supported by many authenticated facts in that inestimable work by Macintosh, and that it is true is supported by experience of Potter than whom no man has had a greater, Substantiated then by such high authority, and believed to be true by so many let it be used to alleviate the sufferings of man, in relation to that disease which is of so frequent occurrence,

Cathartics. In addition to blood-letting we have a most efficient article as an auxillary, a remedy which alone will cure the disease when the congestion is slight, when the cold stage is not protracted, and when the symptoms put on a mild appearance, and this is Calomel the only true and sure conqueror of malarious affections. By its the biliary organs are made to assume, a healthy action, the Liver is relieved from its congested state, a due and healthy secretion takes place, and to ensure its success as a cathartic, it may be beneficially combined with other articles of the Cathartic class, and we can select no one more mild and at the same time more efficient than Jolap, by its combination a more perfect evacuation is effected and consequently a greater depletion thus more certainly effecting a removal of

the disease. Emetics have been recommended to bring on the reaction, they have been used and with apparent benefit. But when? 'Tis when the congestion is slight when this deleterious agent - miasm, has not fallen on the system in a concentrated form when it is exceedingly diluted making but a slight impression. 'Tis then only that that they can be beneficial, and 'tis by the succussion given to the neighboring viscera that the biliary secretions are emulged and by the per anal evacuations, depletion is produced, congestion removed and the disease cured.

Diaphoretics. After the appearance of the hot stage if it be permitted to appear which it never will if blood letting be observed in the first instance. 'tis said that the symptoms may be palliated by diaphoretic remedies to the use of which I object. If there be congestion or if there be in-

flammation, they will not have the desired effect on the contrary by their stimulating property will tend to aggravate the congestion already existing, but if blood-letting be resorted to in the first stage, instead of this burning and constricted state of the surface it will be followed by a pleasant glow of warmth, and the febrile symptoms will disappear without the use of any such remedies. Blisters have been extensively used in this disease, but we are to be careful at what period of the disease we use them, we are to guard against their use 'till that inflammatory state of the system is removed as they are purely stimulating in their nature as their primary impression is that of a stimulant, in consequence of which they would produce it in a more intense degree, but when the system is sufficiently depleted, when it is brought to what is termed the blistering point then they will have all the effects of the revulsives.

Tonics have been universally acknowledged as being the most efficient remedies in guarding the system - and preventing the attack. For what purpose are they given? At what stage of the disease? they are used after inflammatory action has been subdued and for the purpose of sustaining the system, and preventing the impression of this sedative agent miasm. for giving to and vigor to the body to enable it to resist the its injurious influence, and for effecting this object we should give those articles that are most durable in their impressions. Thus the disease when properly treated is easily managed, but when enlargements, indurations etc of the viscera take place mercurials are to be resorted to, but it is the duty of the practitioner to view the congestion, that exists as a secret enemy and which will finally by attacking the system, make a conquest of the whole, and that before it shall yet have made its ravages, put it to flight by the bold, and courageous use of the Lancet.

1837

An

Inaugural Dissertation

on

Delirium Tremens

For the degree of

Doctor of Medicine

Addressed to the

Medical Faculty

Prevost and Trustees

of the

University of Maryland.

By Thos S. Stone.

Among the various mental diseases to which man is subjected, there is none perhaps upon which there exists a greater diversity of opinion as regards its true nature and seat, and particularly the remediate plan to be persued as in the present disease. The disease commonly commences with general indisposition, a feeling of distress in the epigastrium, anorexia, giddiness a sense of confusion in the head want of sleep and an anxious expression of countenance. after a day or two the countenance exhibits an expression of alarm and suspicion, the eyes are cast about with quick glances, or often fixed appearantly upon some object that attracts the attention for a moment, and then quickly withdrawn, the tremor of the hands increase he becomes irritable and sometimes irracible. To avoid those horrid illusions he calls out loudly for assistance. runs to the door to make his escape or to the window to leap out, is greatly agitated vociferates threatens and sometimes raves violently, when contradicted

he becomes much exasperated and insists upon the correctness of his notions, but if mildly and soothingly dealt with may be induced to answer questions and take medicine. They are generally very obstinate and refuse every thing offered them under the impression it is poison. the bowels are generally constipated and indeed in every case I have seen they have been in this condition. the tongue is covered with a white fur, nausea and sometimes vomiting. The pulse in this disease varies very considerably in different cases, in some instances it is hard full and frequent, but in most cases it is soft full and quick, without much tension or strength. thirst for cold drinks very considerable. the duration, and degree of violence in Mania à potu vary in different cases. In some instances there is only a slight degree of tremor sensorial illusions and watchfulness for a day or two and then pass off. In the more severe cases the symtoms continue for five or six days and then pass away. Sometimes they are entirely free from

all the symtoms during the day and return again at night with visional illusions, sometimes this state of things continue for two weeks but in the more highly agravated form the disease assumes the character of a wild and ungovernable mania. Dr Armstrong observes that if the patient be not restored in one month there will be a risk of long continued if not permenant alienation of mind. It has been observed that patients labouring under this disease do not appear to suffer in the least from the most severe injury. I have seen this fact verified in case in the Baltimore Infirmary in which the patient did not appear to experience the least pain after having leaped from the second story and fell upon a brick pavement. and it is further observed that when delirium supervenes upon an inflamatory affection accompanied by pain the principal disease seems to disappear. Mild cases when left to themselves have been known to terminate spontaneously on supervention of a diarrhea or vomiting. discharges of this kind often bring on a

typhoid condition of the system, and this is more apt to be the case in persons whose constitutions have been broken down by previous intemperance. In full and robust habits the disease not unfrequently terminates in fatal convulsions and apoplexy. Pathology. Various opinions have been brought forward and I believe a difference still exists respecting the location of this disease. Whilst some declare it to be seated in the stomach others again affirm that it has its primary location in in the brain. Arguments have been brought forward on both sides in support of their opinions. It would be unfit in this place to detail all the arguments that have been advanced on either side as it would be productive of no utility. I believe it is now generally admitted by physicians that this diseas has its its primary and essential seat in the Sensorium Commune and that it is wholy independant of inflamation or vascular turgescence of that organ, and it seems to consist of a morbid activity of the brain from

a sudden abstraction of an habitual stimulus by which its excitability had been blunted or repressed. Dr Coats appears to consider it a hightened activity of sensorium and similar views have been expressed by Dr Johnson and Ayre. Dr Klapp says that it has its seat principally in the stomach and founds his opinion upon the symtoms which sometimes accompanies the disease such as nausea and vomiting, and the inflamation found in the stomach in post mortem examinations. The few cases of which I have had the opportunity of examining I did not see in any instance Inflamation of the stomach sufficient to have caused death not more perhaps than would have taken place under any circumstances. The brain is sometimes much engorged and distended with blood this occurred in one instance in a young robust plethoric man who appears to have perished from apoplexy which is described as sometimes accompanying this disease. From the cases I have seen there was but one in which nausea and vomiting were present and the disease

in this instance supervened upon Gastritis under which the patient was suffering when he first entered the Infirmary, symptoms of delirium tremens not making their appearance for two days after his entrance. I must come to the conclusion that the disease is not dependant on inflamation that it is a morbid activity of the brain from the sudden abstration of an habitual stimulus.
Prognosis. Delirium Tremens in its mild form and uncomplicated with any other disease is generally easily managed, but when it appears in persons whos constitutions have been previouly weakened by disease or broken down by long and excessive intemperance, or when it superveneS during the course of violent fevers or during the existance of acute visceral disease it almost always terminates fatally. and also old drunkards labouring under some chronic visceral disorder; patients of this kind seldom recover; when it is attended with constant delirium small weak pulse; covered by a cold perspiration, extremeties cold pupils

small and contracted subsultus tendinum and an agitated motion of the muscles of the face, death is almost inevitable. Coma or convulsions are also unfavourable signs. If you can bring on calm tranquil sleep your patient will recover, as has been observed your patient must sleep or die. Indeed I have seen them in a most furious mania fall into a sleep for eight or ten hours, and wake entirely restored, then only remaining some soreness from the powerful exertions during their delirium. Treatment. I shall first speak of the course of treatment to be pursued when the disease assumes a simple and uncomplicated form. In this form bloodletting is rarely ever necessary except in some young robust plethoric habits, where there is a strong determination of blood to the head: then a bleeding from the arm is required. patients labouring under this disease will not bear the loss of much blood. As the bowels are generally constipated, a mild purgative as preparatory for other more powerful remedies should always be administered, after the bowels

have been fully evacuated the free use of opium should be resorted to given in large and repeated doses in order to calm your patient and induce sleep, from which in a great majority of mild cases he will awake entirely recovered. Opium combined with Calomel has been employed and with success though I think in mild uncomplicated cases opium possesses adequate powers to subdue the disease. Camphor has been successfully used particularly as an auxiliary to opium. The shower bath particularly the douche in the commencement of the disease in strong robust constitutions, where the patients strength is not too much exhausted acts very powerfully in the reduction of mania. Various articles of the stimulating class have been employed. All appear to have their their favourite remedy. a mixture of Assafoetida amonia and Camphor water the proportions of

Aqua amonia m.X
Tinc Assafoetida ʒij
Aqua Camphora ℥vj

Take table spoon fule every two hours.

the practice of using brandy beging with free doses and gradually diminishing the quantity has also its advocates among whom is one whos talents and medical acquirements entitle him to the highest and most elevated station in his profession. Indeed were I to advance an opinion I would say that from the trials I have given it I have been as successfue in this as in any other practice, in that form of the disease of which I am now speaking. Emetics have also been employed and highly spoken of in many a pstu, Dr Eberle says they may be very advantageously administered in the begining of the disease more as a preparatory measure for the administration of opium than as a principal curative means. As to the employments of emetics in this disease I can say nothing from experience. From the large quantity that is required to produce emesis in this disease they may have two effects that of evacuating the stomach and sweeping through the whole intestinal canal dislodge all bilitated secretions which may have collected

before the disease had made its appearance; it is in this way I think and from their slightly sedative effects that emetics have proven beneficial in this disease. the Camphorated tinc of opium, Hoffmans anodyne have als been employed. I have seen blisters applied to the back of the neck or between the shoulders of emenu service in cases accompanied with much cerebral disturbance. I should have mentioned that local blood-letting may be resorted to sometimes in this disease with great advantage. Cups applied to the temples or back of the neck I seen as a great deal of service. an Infusion of the Humulus lupulus combined with porter has been highly recommended. Thus I believe I have mentioned ale the most important articles that have been employed in the treatment of Delirium Tremens and in a short and imperfect manner spoken of their application; It now only remains for me to speak of the disease as it appears complicated with other disorders.

In undertaking this we are met by obsticles almost insurmountable. When we consider the various circumstances which may tend to modify the disease, the disorders with which it may be complicated, age, constitution, habits, of your patients &c. when we take into consideration all these circumstances it would be an endless task and productive of little good to enter into a full detail of all the symptoms which characterize the disease in its various and complicated forms. It may supervene upon Pneumonia Gastritis Hepatitis &c each of which perhaps would require a different treatment, and present different symptoms. In cases of this kind we are to be guided entirely by the symptoms that present themselves, and a knowledge of the pathological conditions of organs affected, we will seldom err in the selection of those means which would be applicable in every case upon which we may be called upon to treat. Thus I have in a very brief and imperfect manner attempted to describe the disease and mode of treatment as respects the latter the physician must be guided entirely by the symptoms

1837

Dissertatio de Hæmoptysi,
inspecti, procuratorum nec non facultatis medicæ
universitatis Marylandicæ
examini,
pro gradu doctoris medicinæ,
subjecta,
auctore Joanne Byrne.

Henrico Morris medico,
sub cujus auspiciis
medicinæ studio hactenus operam dedit,
hoc opusculum,
amoris reverentiæque pignus,
dedicat consecratque
auctor.

De Haemoptysi

Vox haemoptysis, quæ ex duobus græcis vocabulis (αἷμα sanguis et πτύειν expuere) coalescit, generatim significat sanguinis expuitionem quâlibet ex causâ ortam. In hac thesi verò eam, lato sensu non sumemus, sed tantùm pro eâ expuitione sanguinis, qui ex pulmonibus provenit.

Pathologia. In lato medicinæ campo pauca quidem à scriptoribus recentioribus magis illustrata fuerunt quàm haemorrhagiæ pathologia. Quâ de re haud est mirandum: nam dùm multa pathologico scriptori investigatione perdigna offert, medico etiam summa curæ esse debet. Appellatio ipsa haemorrhagia satis testimonii pro se fert de falsis doctrinis, quæ in medicâ scientiâ de ipsius naturâ olim obtinuerunt. Casibus fortuitis moniti de periculo, quod magnorum vasorum sectionem sæpè sequitur,

intelligentesque modum, quo sic tollitur vita, homines falsâ similitudine decepti, haemoptysin unâ cum aliis occultis haemorrhagiis ex aliquo vase disrupto procedere concluserunt. Eindè philosophiae medicinalis imperiti singula sanguinis sputa tanquam certa indicia ruptura vasorum in pulmonibus etiam hodiè habent. Quâ quidem ex causâ sanguinis ex pulmonibus fluxum aliquandò procedere certum est: caeteris verò causis comparata, velut ~~causus~~ casus infrequens, sine dubio est habenda. Morgani jampridèm veram haemorrhagiae pulmonariae naturam demonstravit. Praeclaro autem Bichat reservatum est, tenebras dispellere, quas theoria et hypothesis vaga rei maximi momenti offuderant.

Inter observationes de exhalatione, doctrinam proposuit argumentisque defendit, quae morbosae arteriarum capillarium actioni quasdam haemorrhagias attribuit.

Quæ capillares arteriæ, ut putat Bichat, functionibus adhuc integris, abstrahunt ex sanguine liquidum proprium textorum in quorum formationem ineunt; cùm autem morbo sunt affectæ, perturbatis legibus, quibus in sanitate ipsarum functiones gubernantur, pro secretione consuetâ, sanguinis particulis haud idoneis usibus suis ingressum præbent. Observationes multæ atque inexpugnabiles anatomicorum studio accumulatæ, doctrinam à Bichat propositam omninò corroborant. Indè supervacuum nobis videtur facta physiologica enumerare, quæ ad eam sustinendam adduci possunt.

In arteriarum igitur capillarium conditione modò descriptâ morbus ipse essentialiter consistit; hæque conditio arteriarum capillarium aut ex vigoris amissione, aut ex sanguinis fluxu impetuque aucto exoriri potest, cujus impetûs et fluxûs ipsis in pulmonibus, ~~aliûve~~ quâdamve aliâ corporis parte

inest causa efficiens. Hujus distinctionis de capillarium statu rationem habere in medendi modo maximi est momenti; nam, ut patet, remedia, in quibus in uno casu fiducia meritò reponeretur, in altero maximè essent exitiosa.

De causis, quæ hæmoptysin excitant, tractantibus, quædam extraneæ et præsertim tubercula quæ in pulmonibus sæpè gignuntur, occasio nobis erit annotandi. Utrùm ex tuberculis in pulmonibus hæmoptoicorum sanguinis expuitio proveniat, an contrà tubercula ipsa ex sanguinis expuitione producantur, diu fuit agitatum,

.... "et adhuc sub judice lis est"

Inter utriusque sententiæ advocatos atque adversarios, ~~boni viri~~ homines, summo præditi ingenio, omnique doctrinâ medicâ conspicui, annumerari possunt. Per multa sæcula hæmoptysis tanquàm phthisis

causa habita est, quia symptomata tuberculorum clariora sæpè procedit. Recentiores autem pathologici inter ~~strumatica~~ strumosa pulmonum conditionis consequencias potiùs eam ponere videntur, multique auctores notissimi hæmoptysin tuberculis, tanquam eorum causam, nunquam proire contendunt. Sic, Laennec affirmat, quamvis sanguinis ejectio sit sæpè primum et instans symptoma in phthisi, pectoris tamen exploratione, tuberculorum etiam tunc existentiam demonstrari; si vera sit opinio opposita, in tubercula converti debere quamlibet pulmonum partem sanguinem semel infarctam, quod affirmari non potest; ex eo quòd nulla mala ~~se~~ ~~efficantur~~ sequuntur hæmoptysin ex injuriis mechanicis ortam, postquam fuit penitùs depulsa. Omnibus autem argumentis attentè perpensis, nobis videtur pulmonum statum, ex quo oritur hæmoptysis, tubercula producere

posse priùs existente, scrofulosâ in pulmonibus ~~predispositione~~ scrofulosa seminibus. —

Symptomata. Inter symptomata, quæ sputa sanguinea præcedunt, et causam ex quâ provenit istud morbosum phænomenon, intima necessariè existit connexio. Indè si ex sanguinis redundantiâ in pulmonibus, cordis morbo, aut cujuslibet organi conditione pathologicâ procedit, decessio morbi (id est ~~scilicet~~ hæmoptysis) indiciis causæ propriis distinguetur. Longè autem abest propositio nostro, et quidem abs re foret, multa proferre indicia comitantia morbos, quorum hæmoptysis velut symptoma haberi potest. Quorum cognitio indiciorum petenda est ex scriptis auctorum, qui tractaverunt de iis morbis, quos inter causas hæmoptysin excitantes enumeraturi sumus.

Pauca quidem symptomata hæmoptysis, propriè dictæ, invasioni præeunt. Deprès

-sio universa; aliquando frigus febri com-
-itatum; algori succedens faciei rubor; una
cum capitis dolore, ~~corporis~~ cordis palpitatione
et sputis salariis, prima sunt symptomata
quæ attentionem attrahunt. Adsunt etiam
sæpè pectoris oppressio spiritusque difficultas.
Symptomata autem minus ambigua ad san-
-guinem in pulmonibus effusum spectant.
Quam ad causam referenda est ponderis sen-
-satio in præcordiis; secretionum ex membranâ
mucosâ pulmonum augmen; dyspnœa; tus-
-cis, nunc crepitans, nunc mucosus: donec tan-
-dem, cum sensu titillante in faucibus ipsa
sanguinis et rubri et spumosi eruptio sequi-
-tur. Quocirca ~~diligenter considerare~~ oportet medicum
~~considerare~~ observare ~~oportet~~, utrùm spumosus et ruber
sit sanguis ejectus; hæc enim duo sunt ex
certissimis indiciis sanguinem ex pulmonibus pro-
-venire. Licet symptomata modò exposita,
hæmoptysi ferè semper præeant, notandum
est tamen haud deesse casus, in quibus nul-

-lum symptoma ipsam morbi invasionem ~~praedit~~ praecedit.

Quodcunque alicujus organi integra functioni obstat, morbum totius corporis producere potest. Indè hæmoptysis, quamvis ex pulmonibus solis, omnia alia organa sæpè morbo afficit, sicque ægrotus interire potest debilitate, irritatione sympathicâ et protractâ oppressus.

Causæ. Pathologiâ hæmoptysis jam expositâ, meliùs parati sumus ad ejus causas tractandas, detegendamque connexionem inter eas et conditiones morbosas, quas producunt. Quandò inspicimus pulmonum structuram, functiones quas peragunt, atque vim, quam multa corporis organa in ipsos habent, facilè intelligimus cur tam frequenter occurrant sanguinis ex organis spiralibus ~~spiralibus~~ (i.e. profluviorum) profluvia, dùm eodem tempore eorum causas aut directas aut indirectas laberi posse videmus.

Inter causas directas numerantur organici cordis morbi; fluxio sanguinis imminuta in vasis magnis cordi vicinis; status corporis incurvatus, quo evenit ut magna sanguinis copia ad pulmones impellatur; vitiata thoracis conformatio aut innata aut adscita. Exindè maximè perniciosum est mos iste muliarum feminarum ac virginum, quæ, ut juncea videantur, mortiferis artibus pectus in angustias cogunt; ignaræ sese, ita angustando thoracem, januam tabi mortique aperire. Causis modò enumeratis etiam addi possunt lesiones externæ ex ictibus aut vulneribus thoracis parietes penetrantibus; pertussis; nimia contentio vocis; immoderatæ exercitationes; animi contentio nimis magna; frigor; tuberculorum aliorumque corporum extraneorum, verbi gratiâ calculorum, in pulmonibus existentia; vita sedentaria et denique alicujus pulmonum vasis ruptura. Auctores etiam memorant speciem bronchitis epidemicam profusio sanguinis

ex pulmonibus fluxu comitatam. Ut sæpè maximi est momenti hunc morbum secernere, de eo plura dicemus diagnosin tractantes

Inter causas indirectas præcipua est uteri functionis perturbatio; sic observatione et experientiâ firmatur, quod colligere valet ex theoriâ physiologicus. Modò hæmoptysis tempus menstruis proprium prævenit modò sese non manifestat; donec, uterò ipsius ministerium haud peragente, supervenit amenorrhœa; etiamque referuntur casus in quibus sanguinis ejectio menstruorum locum omninò usurpavit atque, prægnante muliere, desiit. Sæpè adest etiam hæmoptysis cum humores leucorrhœæ, hæmorrhoidum multorumque aliorum morborum comites, fluere desinunt. Interdùm quoque permagna mentis perturbatio eam producere potest.

Causarum enumerationi finem facturi notabimus ferè omnes hæmoptoicos

esse naturâ ~~propensionem~~ proclives ad hemorrhagias ~~existere predispositionem hemorrhagiarum~~, atque in illis ~~iisque~~ ea omnia, quæ redundantiam sanguinis in pulmonibus producunt, posse etiam hæmoptysin excitare, et denique hæmoptysin, critica (seu adventitiam) ~~vice critica~~ tanquam humorum ejectionem, varò occurrere: natura enim, ut ita dicam, injuriam, quâ ita afficiri possunt organa vitæ tam necessaria, cavisse videtur.

Diagnosis. Hæmatemesis (seu sanguinis vomitus) et sanguinis fluxus ex naribus ferè soli sunt morbi, pro quibus hæmoptysis accipi potest. Sanguinis ejecti color, spissitasque unà cum circumstantiis ipsius ejectionem comitantibus, præcipuam discriminandi rationem nobis præbent. Quum igitur, dolente thoracis parte quâpiam, quis tussiendo ejecerit sanguinem, neque copiosum, neque grumosum, sed rubrum spumosumque, huic thorax primariâ affectione infestatur; contra verò multus sanguis niger, cum iis, quæ in ventriculo con-

-tinentur, commistis vomendoque ejectis, ven-
-triculum morbi eadem esse indicat. Quamvis
adspectu primo, consideratis discriminis symp-
-tomatibus, morbos tam latè dissimiles confun-
-dere difficile ~~est~~ videatur, haud tamen
desunt casus, in quibus diagnosis (seu discri-
-men) minimè facilis est. Atque equidem,
omnibus attentiis perpensis, res ita sese la-
-bere mirum nobis videri non debet. Sic
Laennec hæmoptoicum decem sanguinis libras,
quadraginta octo horis, ejecisse narrat, ~~eodem~~
eodemque tempore dicit, vocem vulgarem,
"sanguinis vomitum", ejusmodi casibus jure
attribui posse. Nunc ex eo quòd tussis vomi-
-tionem sæpè movet, ac magna sanguinis
copia ex pulmonibus orta, sed dein sorpta et
sic cum iis, quæ in ventriculo continentur, com-
-mista vomendo ejici potest; facile est con-
-cipere ~~casus~~ casus (et quidem non semel acciderunt,
ut constat ex Mackentosh multorumque auc-
-torum scriptis) de quorum naturâ, consuetis

discriminis rationibus, in errorem ducere-
-mur. Praeterea ejectionem sanguinis ex ven-
-triculo haud semper comitatur vomitio. Quæ
cum ita sint, stethescopus rationem maxi-
-mi momenti ad rectam conclusionem attin-
-gendam nobis probet. Si nullum pulmo-
-nem morbum patefaciat stethescopus, tunc conclude-
-dum est ventriculum faucesve morbo infes-
-tari: ex diversis autem symptomatibus di-
-versa etiam esse debet nostra conclusio.

Ut jam notavimus, hæmoptysis simi
potest pro fluxu sanguinis ex faucibus aut gin-
-givis. Ille (id est, fluxus sanguinis ex faucibus) lasioni-
-bus mechanicis; hic autem dentium morbo, sæpè
producitur. Quarum autem partium inspectio
medicum liberabit omni dubitatione de verâ
morbi naturâ

Bronchitis epidemicus, cujus mentionem
jam fecimus, in suis symptomatibus hæmopty-
-sis speciem pro se fert. Oppressio universa, cibi
fastidium, nausea, lingua squalida, pulsus

frequens debilisque una cum aliis symptomatibus per stethescopum patefactis istius morbi accessionem satis indicant

Prognosis. De prognosi haud multa dicemus. Tanquam lex generalis, nullis existentibus in systemate phthisis seminibus, ab hæmoptysi haud multum periculi timendum est, nisi sanguinis ejectio adeò profusa sit, ut imminet mors præsens. Multò longiùs et quidem etiam ferè impossibile foret omnia enumerare symptomata, quæ exitum tristiorem aut faustiorem promoneant. Sufficiat igitur observare, cognitionem veræ conditionis pulmonum (ad quam comparandam multum valet stethescopus) solam esse rationem quâ prognosin veram adipisci potest medicus. In deducendâ conclusione multa sunt relinquenda eo acumini ac solertiæ, quæ studio clinico comparantur.

Summa requiritur prudentia in eis, qui

ad hæmoptysin sunt ~~ita dispositi~~ naturâ proni, ne hunc morbum evolvant. Cùm autem causa prædisponens, nisi ad agendum excitata, usquè forsàn latebit; vivendi modo, dietâ, valitudinique invigilando multùm effici potest. Illum igitur, cui imminet hæmoptysis, in omnibus temperantiam servare maximè oportet. Magnâ curâ ipsi etiam esse debet, omnia fugere quæcumque in systemate sanguinis redundantiam procrearent, vitareque omnes, sive mentis, sive corporis, stimulos ad cordis actionem excitandam idoneos. Præterèa artem seligere debet, quæ nullum præbebit impedimentum integris pulmonum functionibus peragendis, quæ etiam, nec per multùm laboris, nec immoderatam vocis contentionem postulat. Quibus si pariter jungantur omnis cibo stimulanti abstinentia, requies moderata, salubris aer ruris, exercitatio modica, et præcipuè in equo, vel in rhedâ, societas fidelis ~~ami~~

amici hilaris, nihil fuerit neglectum, quod hæmoptysis evolutioni occurrere potest.

Ratio medendi. Nunc de ratione medendi nobis tractandum est. Inter omnia remedia in hoc morbo impugnando certè quidem longè præstant venæ sectio et diæta. Hyperæmia (seu infarctioni) organi tanti momenti quanti pulmones, semper adest periculum. Natura, ut ita dicam, hujus præsciæ, statui tam periculoso remedium hæmoptysi quærit; atque ita medico simile remedium suadere videtur. Sanguinis detractionem in hæmoptysis curatione maximè profici etiam testatur experientia. Sic auctor recens ac peritissimus declarat se, in hoc morbo impugnando, nunquam pœnituisse, quod scalpello liberiùs usus sit. Apud veteres idem sentiebat Hippocrates. Exindè quandò hæmoptoicus febri afficitur cum pulsu frequenti atque forti, copiosum sanguinem detrahere haud cunctandum est. Hujus

autem remedii potentissimi abusum mala produxisse nostissima dubitare non possumus. Nam ut dixit Hoffman de remediorum mercurialium abusu loquens: "peritiores non sine ratione in heroicorum remediorum numerum retulerunt scalpellum, eo quod ejus indolis ac virtutis sit, ut ejus providus usus valdè prodesse; abusus verò valdiùs nocere possit; ideoque in manu imperiti, tantùm glaisium, in manu furioli, sit". Sic in hæmoptysi, cùm aut ex tuberculis in pulmonibus, aut capillarium arteriarum debilitate oritur, ~~ta~~ minimè prodest venæ sectio; sæpè contra, sine dubio, nocet. Nam ut benè annotat Laennec: neque tuberculorum evolutionem prævertere, neque eadem semel evoluta removere potest scalpelli usus. Quibus in casibus remedia corroborantia atque astringentia, aer frigidulus, cibus succulentus siccusque magno sunt commodo. In usu ergo scalpelli etiamque hirudinum et scarificationum, quæ remedia sunt

sapè efficacissima, dirigendus est medicus legi-
-bus generalibus, quas enumerare nostrum haud
est.

Cathartica remedia, juxta Sydenham, proser-
-tim in hæmoptysis casibus, ubi adest inflammatio
violentior, sunt sapè efficacissima. Laennec etiam,
auctoritate suâ, idem confirmat, dicitque perti-
-nacem sanguinis fluxum ex pulmonibus, reme-
-diis aliis frustrà tentatis, cathartico medicamento
tanquàm incantamento sapè removeri. In eorum
usu vix necesse est dicere, stomachi atque
intestinorum conditionis rationem semper este
habendam.

Cataplasmata et <u>vesicatoria</u> adhiberi
possunt, sanguine, si necesse fuerit, priùs de-
-tracto. Medicamenta refrigeratoria, nau-
-seosa et, si jam ampliùs nulla adsit inflam-
-matio, astringentia, veluti acida mineralia, al-
-umen, <u>plumbi acetas</u>, auxilia sunt maximi
momenti. Sal communis ab Rush remedium
optimum habetur. In statu solido, non autem

liquefactus dari debet.

Digitalis, aliaque remedia narcotica, omni repressâ inflammatione, in hæmoptysis curatione sæpè prosunt. De remediis à doctore Beddoes propositis, quæ rarò adhiberi possunt, nihil dicemus; quæ enim jam tradidimus, abundè sufficiunt, thesimque ~~finem~~ ad finem perducturi, tantùm animadvertemus quædam à nobis fuisse usurpata vocabula, arti medicæ propria, quæ, uti speramus, minimè reprehendent periti atque integri judices.

An

Inaugural Dissertation

on

Bronchocele

addressed to the

Trustees and Faculty

of the

University of Maryland

by

John S. Harrison Va. of Va.

for the Degree of

Doctor of Medecine

A.D. 1837

Bronchocele

In selecting this disease for the subject of my Thesis; I do it, not with the expectation of producing any new doctrines, from my own observation or experience, or elucidating in any degree, what has already been advanced by the many Authors on the subject. But in conformity with the rules and regulations of the Institution, and with a hope of acquiring a better knowledge of the malady, from the research that will be necessary to accomplish this object; I commence my Dissertation, respectfully inscribing it.

To the
Professors
of the
University of Maryland.

Bronchocele,

So remarkable in its appearance, so respective in its attacks, so various in its results, and so mysterious in its causes, was long known to the Ancients under different Appellations. The Disease is characterised by a chronic enlargement of the Thyroid Gland, situated on the anterior portion of the neck between the Trachea and skin. We are told by Medical Authors, that Goitre is more prevalent in other portions of the Globe than North America. It is of rare occurrence, in comparison with other diseases, that afflict the people of this country. In some portions of Great it prevails to a great extent, but is not of so common occurrance even there, as in the Alpine and other adjacent mountainous Valleys of Switzerland, where the Inhabitants are so seriously affected either by it, or its common cause, that they are almost looked upon as a peculiar race. Bronchocele is characterised

at its commencement, by a small tumour on one or both sides of the Larynx and Trachea; which, if uninterrupted by remedial applications, progresses until it attains an enormous and fearful size, including the whole anterior portion of the throat. At the commencement of the disease, the Tumour is soft, elastic and spongy to the touch, the Skin is of a natural colour and not adherent to the Gland. But as the disease progresses, the Tumour assumes a firmer texture, and in severe cases, certain portions acquire great density and firmness while other portions retain their soft and spongy state. Goitre is attended with no pain or tenderness at its commencement, and steals on its subject almost imperceptably, until it attains some size; when it sometimes becomes indurated, and transient pains are felt through the Tumour, the Skin assuming a red colour. When the Gland attains considerable size, the functions of its relative organs are interrupted

by pressure made upon them. Difficult respiration and deglutition are experienced, owing to the pressure made upon the Larynx and Oesophagus: And when pressure posteriorly is great, its action upon the Carotids and Veins is productive of unequal circulation, giving rise, in some instances, to cerebral congestion, palpitation of the heart and great precordial distress. This is not the general course of the disease. It varies; In some instances rapidly increasing in size, but more generally, its advancement is gradual and regular.

I have already alluded to the effects of Bronchocele, or its common cause on those Unfortunates, who live in regions, where the disease prevails endemically. In the deep valley of the Alps; Man is doomed from the influences that surround him, to sink from that high attribute allotted him, to a sphere even beneath that of the animal creation. It appears that deformity of an awful character, from a combination of

afflictions, attacks all; Cretinism is the malady, and the unfortunate subjects are denominated Cretins. A knowledge of the fact, that Cretinism does, in some climates, appear in connexion with Bronchocele, does not prove that it is a necessary result of the disease; but on the contrary, strikingly illustrates that Goitre originates from different causes. Cretinism has never attended any case of the disease, that has ever occured in the United States. Bronchocele has been classed by Doct. Good as a Cellulose Cystose tumour, containing a serous fluid; but its consistence, Authors say, depends in some measure, upon the length of time it has existed, and the different forms it assumes; for old Goitrous tumours, we are told, have been found to contain masses of ossified and Cartalaginous substances, and also under different circumstances, to have been made up almost wholly of a congeries of Varicose Veins. Active inflammation or suppuration seldom ever take place in the disease; and if Suppuration

be a consequence, either from external injuries or irritating applications, it will in some instances effect a complete cure. Cases of this kind are on record; and hence the application of Setons. Instances are also on record, where ulceration has taken place into the Trachea, and caused death by suffocation.

In discriminating Goitre, from other diseases, that affect the region in which it appears, there are, as in all other maladies, certain diagnostics, by which we are to be governed. Aneurism of the Carotids, an enlargement of the organ, on which the Thyroid Gland is seated, and also the Lym=phatics Glands of the neck; and sometimes a dilatation of the external jugular veins, are all diseases, that may be supposed, upon superficial examinations, to exist; when Bronchocele is the affection. Aneurism may be the supposed affection, when a portion of the diseased Gland extends over the Carotid, and a pulsatory motion is imparted to it, by the action of this Artery.

Doctr. Eberle cites a case, that occured in the City of Philadelphia; in which many eminent Physicians pronounced the disease Aneurism of the Carotid; which, upon a dissection after death, was found to be an enlargement of the Thyroid Gland. Bronchocele may be recognised. "When the tumour accompanies the motion of the Larynx & Trachea in the act of deglutition, is moveable, wholly insensible, soft and spongy to the touch, and free from pulsation". Aneurism of the Carotids can be distinguished from Bronchocele, generally by the situation it occupies, by that throbbing Arterial pulsatory motion, that is natural to it; and the sudden return of the Tumour when pressure is removed. By the situation of Bronchocele, we can generally distinguish it from scrofulous enlargements of other Glands of the Neck, which are more susceptable of inflammation and suppuration, than the Thyroid; the seat of Goitre.

The history of this disease is attended with so many singular circumstances, that in a research for for its true cause, we are met on all sides with conflicting difficulties. Authors, who have written upon the subject, attribute the malady to different causes, each basing his opinions on facts of personal observation which have been contradicted by the assertions of others, even before their theories could be promulgated. The disease, it has been observed, prevails in certain localities to a limited extent; while the neighbouring inhabitants are exempt from the malady. It has been ascertained certainly that Bronchocele prevails at all periods of life, and that both sexes are equally liable to its encroachments; notwithstanding some Authors have asserted that Women are more liable to it than men. It has been observed in the young the middle aged, and the old. It has been asserted by some Writers that the disease is congenital, and contended by others that true

congenital Bronchocele never occurs. When the disease occurs in females after marriage, it is said to take place generally during pregnancy; this assertion, I believe has not been denied; and if one case of the kind adds any proof; I can bear testimony to the fact. It appears that this malady is not entirely confined to the human family; but that the lower orders are also its subjects. Goitre has been attributed to many causes: Viz; Water impregnated with limestone and other calcareous substances, Snow-Water, particular articles of food impairing the healthy functions of the Stomach, the use and abuse of ardent Spirits. Mechanical injuries done to the Gland, vicissitudes of temperature, a dense stagnant and humid atmosphere, an insufficiency of Electricity in the atmosphere &c. All of these several causes have had their respective advocates; and contradictions have followed by others, which have been calculated to leave us in comparative

darkness, as to the true cause of the disease.
That Bronchocele is produced by Water impreg=
=nated with certain unhealthy (unknown) princ=
=iples, there can be be but little doubt; as cases
are on record, that go clearly to prove the fact;
and one that fell under my own observation.
There is a family (Mr George Evans') residing
near my place of residence, directly at the base
of the North mountain in the Valley of Va. Berkley
County. This family was in the habit of useing
the water of a spring on the farm. In the
Winter of 1835, the spring going dry, they were
compelled to resort to an old Well, situated near
the mountain and use the Well Water. In the
Spring of 1835, Enlargements of the Thyroid Gland
were perceived in each member of the Family,
consisting of five children, from the age of 8
to 19; which gave way readily under the use
of Iodine, and an abstinence from the Well W.
Water. That the Disease was produced, by the
use of the Well-Water, there is no doubt, as

there has not been a recurrence of it, since the discontinuance of the Well-Water. The family are surrounded by Neighbours, none of whom were similarly affected, which goes to prove that the disease depended upon a local and not endemic cause. Doctr Coventry's case, (cited by Doct Eberle) also shows, that there are certain principles in Water, that produce the Disease.

In the treatment of Bronchocele, all the remedies, used before the discovery of Iodine, have been almost laid aside since its introduction into practice. And so great is the confidence in this supposed Specific, it is imagined that where it fails, all other remedies are hopeless. It was introduced into practice in 1812, and innumerable have been the cases since that period, proving it to be a powerful remedy in the disease. It's power of facilitating absorption is particularly displayed upon the diseased Thyroid Gland; but its action is not entirely

confined to it, for it is requisite in it's administration, to be careful that other Glandular structures be not destroyed. In all remedies for diseases, the are to be governed by certain rules in their application; and particularly is it the case in the use of Iodine. Although Iodine is generally used without discrimination, the practice is not without reprobation.
If inflammatory symptoms exist about the Tumour; local abstraction of blood and laxatives should be resorted to, before the use of Iodine. A tendancy to congestion of the brain and other internal organs, forbid its free use. "Iodine should never be employed in cases where the patient is of a gross disposition, or tending to Menorrhagia, or in cases where diseases of the Breast threaten to, or have commenced. It should also be refused to persons, who are nervous, delicate, and of feeble constitution." When Iodine agrees with the System, "the appetite is increased, the pulse requires more elasticity.

and heats stronger; when it does not agree with the system; it produces a sense of heat and irritation in the fauces, fullness of the head, pain in the orbits and ball of the Eyes, and obscure vision; and if carried to great extent, tremours and convulsions occur.

Iodine can be administered in many forms and combinations; and as its effects can be obtained by the use of the Tincture internally; it is generally administered in that form. By dissolving ℥j Iodine in ℥j Alchohol, we obtain a preparation, that can be administered in doses from 5 to 10 drops twice or thrice daily; being governed by the age of the patient and the effect it produces. The hydriodate of potassa in combination with Iodine has been found to be the best preparation, and is generally prefered. Prepared by dissolving Hydriodate of Potassa xxxvi Grs. and Iodine. Grs. x. in distilled Water ℥j. from 6 to 10 drops is given three times a day, diminishing

or increasing the dose according to the effects. The external application is in form of an Ointment. Hydriodate Potassa ℈ss–℈iss, used with care until the Tumour declines. Burnt Sponge, from ℈j to ℈ij doses, was a favorite remedy, and much employed before the discovery of Iodine; the remedial powers of which depended upon the Iodine it contained. It was also administered in form of Lozenge. Mercury in various combinations was used externally and internally. The Ext. Conium maculatum in combination with Calomel can be employed with advantage. External discutient and irritating applications are recommended. Friction, Blistering, and stimulating liniments, are all useful remedies, when properly applied.

Bronchocele, like all other diseases, sometimes bids defiance to remedial powers, and progresses as I have already described; threatening Suffocation and Apoplexy. In cases of this

formidable character, Setons passed through the Tumour, sometimes prove successful and produce happy effects. The Extirpation of the Gland has been practised by some bold Practitioners; but as the operation is always attended with dangerous consequences: I view the case as hopeless, that requires such an remedy. Tying up the Superior and Inferior Thyroid Arteries, thereby diminishing the afflux of blood to the tumour, has been recommended and practised with more or less success.

But such is my confidence in Iodine and its preperations; from the success that has attended its use, that I shall view it as the Sheet-Anchor in

Bronchocele.

An Inaugeral Thesis

on

Scarlatina

Submitted to the Medical Faculty

of the

University of Maryland

for the degree of

Doctor of Medicine

by

James Levering

of Baltimore

Maryland

Feby 15th 1837

Scarlatina

The great mortality occasioned by this disease of late years renders it a subject of peculiar interest. It is a fearful scourge - scarcely exempting a family from its visitation, and seldom departing without a victim. It is comparatively a new disease. We have no reason to believe it was known to the ancients, as no allusion is made to it in the works of Greek & Roman writers. The first or at least one of the first who observed and described it, was Prosper Martianus, an Italian physician who saw it in Rome about the middle of the 17th century, and soon after it was noticed by Sydenham and Morton in England. It was at first confounded with measles and other eruptive diseases, and hence was called "Morbilli confluentes", "Rubeoli Rossalia", &c, but Dr Withering in an essay published in 1778, described it accurately and shewed it to be a distinct disease.

Scarlet fever is a contagious, eruptive disease, distinguished by a scarlet efflorescence upon the skin and upon the mucous membrane of the mouth & fauces, generally occuring upon the second day of the fever, and terminating upon the fifth accompanied for the most part with inflammation of the throat, either phlegmonous or gangrenous, and often with swelling of the cervical absorbents, and subcutaneous cellular membrane. The type of the accompaning fever is various and modifies the whole aspect of the malady. In some instances being so trivial as scarcely to attract attention, at others of a high synochal character and quite as often of a low typhoid type, with great tendency of the local inflammation to run into gangrene. These differences of type have given rise to a division of the disease into the three forms of Simple, Inflammatory, and Malignant Scarlatina being in truth but different degrees of the same disease.

Causes – Scarlatina is certainly contagious to some extent as we can in no other way account for the phenomena attending its propagation. It however very often prevails as an epidemic. We are entirely ignorant of its causation as we are of the origen of all other epidemics. Like other of the exanthemata it attacks the same individual but once; This is the general rule, though there may be some exceptions.

The poison affects individuals exposed to it very differently of a family, some will be but slightly affected, others will have an acute inflammation of the throat attended with great febrile excitement, and others will have it in its most malignant form. Many persons do not experience any other inconvenience than a slight soreness of the throat which recurs whenever they are exposed to its influence. This has been termed "Scarlatina faucium"

Symptoms - In order to describe this disease we must avail ourselves of the ordinary clasifications of its types, but we must observe that Scarlet fever varies much both in intensity and in form at different seasons of its visitation. Sometimes the character of the epidemic is mild, at others highly anginose, and at others putrid and malignant. Nor is it uncommon to find great difference in the mode of its developement in individuals of the same family. Some will be covered with eruption, others will have none at all. In some it may manifest itself by a soreness of the throat, and in others by glandular enlargements, and dropsical effusions. Indeed Scarlatina assumes as many forms as the fabled Proteus, and consequently no description can be made to comprehend all its symptoms and varieties. We will therefore describe the ordinary appearance of a well defined case of each of the enumerated clases premesing

that they run into one another, and assimilate by so many shades of resemblance that a majority of cases can hardly be certainly ascribed to any one.

Scarlatina Simplex – is a very mild disease, often attracting little attention and seldom requiring medical attendence. It is accompanied with slight fever, followed on the second or third day by a scarlet eruption. The appearance of the rash is that of innumerable red points, at first of a pale, but soon of a deeper red, giving the whole surface a uniform appearance. The papilla of the tongue become elongated, shooting up their red points above the white fur, and this gives it its peculiar appearance. In ordinary cases the eruption may be considered at its heigh upon the fourth day, and gradually declines until the eight, when it has for the most part disappeared. Desquamation of the cuticle generally begins about the 3d, and continues for several days.

The treatment necessary for this form of disease if any is of the mildest character. Low diet cool drinks and an occasional laxative include all that is often requisite.

Scarlatina Anginosa In this form the fever and eruption are accompanied with inflammation of the throat. The precursory symptoms are much more acute, than those of the simple variety. The headach is often accompanied by slight delirium, the heat of the skin more pungent, and the prostration of strength more evident. In the course of the second day the patient complains of a soreness and stiffness of the neck extending to the angles of the jaws, and behind the ears this is followed by difficulty of deglutition hoarseness, and often a slight dry cough. On examining the fauces, the palate, uvula and tonsils, are found red and swollen; and often dotted with patches of coagulable lymph. This appearance may upon a superficial examination be mistaken for ulceration but upon clearing the throat the membrane will be found continuous

As the anginose inflammation becomes developed the febrile symptoms increase - the pulse rises, the respiration becomes hurried, and the thirst intolerable, and these symptoms are aggravated toward evening.

The rash does not usually appear as early in this as in the preceding form. It is not generally noticed until the third day, and comes out in irregular patches. About the fifth day the fever and local inflammation begin to abate, and the rash begins to disappear. Desquamation of the cuticle then begins, and in some instances the entire cuticle of the hand is detached, and comes off in a continuous form, resembling an entire glove. Though this is the usual course of Scarlatina anginosa, it occasionally assumes a much more severe character. Sometimes it is attended with acrid discharges from the nose and ears, not unfrequently with deafness, and often with painful enlargements of the cervical and parotid glands. These swellings sometimes go on to suppuration and

form troublesome abcesses, which are often obstinate. Sometimes they do not make their appearance until the febrile and anginose stages have declined. Dropsy, generally anasarcous, but not unfrequently of the cavities, is also one of the Sequela of this terrible disease, and continues to distress the patient for months after the more acute symptoms of disease have disappeared.

The diagnosis of Scarlatina is not difficult. The affection of the throat being generally sufficient to distinguish it from the other eruptive diseases. From Measles it may also be distinguished by the more general diffusion and lighter colour of the eruption by the peculiar hoarseness, cough and inflammation of the eyes that attend the latter disease, as well as the train of symptoms that often occur after the disappearance of the eruption. Roseola is always much

milder, than the simple Scarlatina. The colour of the eruption is deeper, and it wants the anginose inflammation.

Prognosis. Simple Scarlatina is seldom fatal per se, but in its course some local affection may occur which may give a serious character to it. Generally however the prognosis is favourable

Anginose Scarlatina. is a severe disease and often a fatal one. The inflammation of the throat is sometimes of a very acute character, and if œdematous swelling of the glottis ensue upon it death happens almost inevitably. Besides this source of danger the fever is high, and of course much more is to be apprehended from local congestion and inflammation than in the former instance. Cerebral, pulmonary and abdominal diseases of indomitable obstinacy frequently engraft themselves upon the original disease and

hurry the patient to the grave

Malignant Scarlatina, is among the most fearful and least manageable of all it is the misfortune of a physician to meet with. It is fatal in probably a majority of cases, and of those who recover have more cause to rejoice themselves upon the natural strength of their constitution than upon the skill of their medical advisers. It may be observed however that the mortality of all forms of Scarlet fever varies in different epidemics, and that malignant Scarlatina exists in different degrees of violence at different times and in different persons. of course the prognosis must be in proportion to the violence of the symptoms. the chances may be considered decidedly unfavourable when the following symptoms or many of them are observed. A partial eruption suddenly disappearing or assuming a dark livid hue - smallness and great rapidity of

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the pulse - hurried breathing - hot and dry skin - discharge from the nose and eyes - paleness and shrinking of the features - cold sweats - low muttering delirium - coma - hiccough - involuntary stools - and gangrenous appearance of the throat.

Treatment - The great general rule to be observed in the management of Scarlatina is "not to do too much." We ought to remember that we cannot put a stop to the disease. It is of a specific character and will run its course. All that the physician can do is to guard against lesions of important organs, to prevent ~~the distress~~ congestions, and if possible to prevent the disease taking on a malignant character. We must depend on nature for the recovery and we can only assist her by preventing obstructions from forming in her path. Various plans of

Specific treatment have been suggested and tried. Some stimulate their patients throughout the disease without any reference to its type. Others use depleting measures in all cases. Thus the first are often led into the inconsistency of stimulating a synochal fever, and the latter of depleting a malignant typhus. The fact is no general treatment can be marked out for this disease it must be managed according to the appearance it puts on. In the high form of inflammatory fever, venesection is sometimes necessary but it cannot be carried to great extent. An emetic in the early stage of the disease is almost indispensable. It equalises the circulation, and acts upon the skin. Attention must also be paid to the bowels

Where they are constipated mild aperients should be given. Of these we prefer calomel, for many reasons. It is readily admistered to children, and being of little bulk is much more easily swallowed when the throat is highly inflamed, moreover it exercises a salutary effect on the glandular system which is peculiarly threatened in Scarlet fever. The local affection of the throat also requires relief. Leeching is often very useful for this purpose. Blistering is also often tried and with benefit, but its application requires great judgement and should always be done with many restrictions. If the skin is hot and dry they increase the fever and irritate an organ already in a state of morbid excitement. If on the contrary

the skin be moist and cold, and the pulse indicating great falling off of vital power the blistered surfaces may mortify and rapidly hurry the patient's death. Still they may be used with judgement, and sometimes relieve the inflammation very greatly. Cold ablution has been recommended, and at first sight appears the natural remedy for the disease. It has been tried with great success in Great Britain, but the prejudices of the community are so much against it, and the reputation of a physician would suffer so much from its unsuccessful employment that it has not yet obtained a fair trial here. Sponging with cold water may however be employed and will add to the

comfort of the patient and in some cases to his chances of recovery.

The diet of the patient should of course consist of the lightest and most digestible articles of food. When the throat is much inflamed liquids, only can be taken, and these should be of a mild bland character, still containing as much nourishment as can be readily embodied in them. Cool acidulated drinks are also grateful and useful.

Upon the whole however if we except an emetic or two and occasional aperients, we can do little but watch the disease, guard against organic leisons, and prevent congestions.

Prophylactics. We are as yet unacquainted with any certain means of preventing Scarlet fever. Hahneman first introduced Beladonna as a preventative against this disease. He supposed that as it produced a soreness of the throat and an eruption on the skin, it was the proper antidote. But it has been tried and subsequent experience has not confirmed his views on this subject. It is supposed by most practitioners to have little or no prophylactic powers.

A Treatise

on acute inflammation of the Peritoneum.

Being an

Inaugural Thesis, submitted

to the

Trustees and Medical Faculty

of the University of

Maryland,

by

Edmond Byrne

1837

The Peritoneum is a serous membrane which lines the abdomen, and invests in its duplicatures the numerous vital organs of that cavity with a smooth and lubricated covering, supporting them in their respective situations and enabling them at the same time to glide on each other to an extent which is limited but sufficient for the exercise of their respective functions.

This tissue becomes not unfrequently the seat of acute inflammation, giving rise to a train of constitutional symptoms which lead to a speedy and fatal result unless arrested by early and energetic treatment. It has therefore been deemed worthy of being

treated of as a distinct disease, which has received the name of Peritonitis.

Peritonitis is not confined to any age or sex; but it is most often encountered in the female, and at the adult age, or about the time of puberty, if the growth of the individual should be unusually rapid at that period.

The causes which may excite it are numerous; but amongst the most common are wounds, surgical operations, rupture of any of the contained organs as the bladder, uterus &c ulceration penetrating through the stomach or intestines, difficult and protracted labor

bodily fatigue long continued in cold and damp situations, metastasis from parts at a distance or extension from contiguous ones.

The symptoms are usually well marked. They frequently commence with rigors followed by reaction with a quick and small hard pulse not unaptly compared to a harp string, heat and pain sometimes of a lancinating description in the abdomen and above all extreme tenderness on pressure over the abdominal muscles. The patient will be found in most instances lying on his back, with his knees drawn up, and breathing that as if he dare not take a full respiration.

Added to these symptoms

there may be hiccough or vomiting, cold perspirations and obstinate costiveness. If relief be not obtained, a few days will often terminate the case and death may be prognosticated from the cessation of pain, the pulse becoming quicker, smaller and softer. The belly generally becomes tympanitic and the contents of the stomach come away without any effort to vomit. The intellect in most cases is preserved till the last but sometimes coma or convulsions precede the fatal termination.

Peritonitis in general may be ~~treated~~ successfully combatted if the Physician be early in attendance; the patients constitu-

tution one that will admit of ample depletion, & his disease uncomplicated.

A favorable termination will be indicated by the gradual diminution of pain or pressure, the pulse becoming fuller, softer and slower, the skin warm and moist respiration easier and the countenance expanding.

The usual appearances found on dissection, are increased vascularity and thickening of the membrane, effusion of lymph or fluids, suppuration, ulceration, and gangrene.

The increased vascularity and thickening may be regarded as the earliest effect of the disease; but as the inflammation acquires a greater degree of intensity, effusion, suppuration,

ulceration or gangrene ensues. When a cure is effected by timely depletion it is probable that no traces are left behind; but at a later period adhesions are very difficult to be prevented. These however occasion but little inconvenience in after life, and in examining subjects that have died from other causes, it is not uncommon to find even extensive surfaces firmly adherent where nothing of the kind had been suspected.

Treatment.

In the treatment of Peritonitis the indications which should be kept in view are few, and as has been already observed, will generally be successful if the constitu-

tion be found and the disease uncomplicated.

The action of the heart and arteries must be promptly subdued by a full and sudden abstraction of blood from a large orifice. Leeches will do but little good and if they take the place of general blood letting, they are positively injurious.

The local and general irritation is to be allayed by calomel in combination with opium and warm fomentations.

Three grains of Calomel with 1/3 of a grain of opium should be given every hour till the mouth is affected which may frequently be accomplished in twenty or thirty hours, the fomentations should be applied by means of

woollen cloths wrung nearly dry out of boiling water. They should be used as hot as they can be supported and repeated at short intervals. Small diaphoretic draughts, if given in a state of effervescence may lie on the stomach and will be found very useful. Finally, after the mouth has been slightly touched by the mercury, gentle aperients may be employed to endeavour to procure an evacuation from the bowels. If castor oil can be retained it is perhaps the best, or castor oil and turpentine.

Inaugural Dissertation

on

Dysphagia

Submitted to the Consideration of the

Trustees & Faculty

of the

University of Maryland

for the Degree

of

Doctor of Medicine

By

Frederick [illegible]

[illegible]

A.D. 1849

Inaugural Dissertation

on

"Dysentery"

Submitted to the Consideration of the

Provost & Faculty
of the

University of Maryland;

for the Degree

of

Doctor of Medicine.

By

Nicholas L. Dashiell,
Baltimore

A. D. 1837.

To Dr. Nathan R. Smith,
this thesis is respectfully dedicated, as an imperfect testimonial of the high estimation, in which his private & professional character are held by the author,

Nicholas L. Dashiell,

The reluctance with which a Student of Medicine submits his Inaugural dissertation to the consideration of the Faculty, is equalled only by the diffidence & anxiety which he feels, when about to undergo a Severe oral examination on the multifarious subjects connected with his future Profession. There is one circumstance however, which never fails to support him under these feelings, a knowledge of the fact that those, by whom his talents & acquirements are to be thus rigidly scrutinized, are characterized not only by matured skill and extensive scientific acquirements, but by urbanity & generosity, and a just appreciation of the allowances, which are due to youth & inexperiance. Relying, then, upon their indulgence, and actuated by a necessity from which there is no appeal, I have selected "Dysentery" as the subject of my thesis. Neither on this, nor on any other subject, has my brief experience or reflection sufficed to afford any facts or observations which are new or original. My ambition will be satisfied & the laws of the University complied with, if the condensation which I am about to give of the opinions of others shall be found judicious & correct.—

Dysentery

is an inflammation of some portion of the mucous membrane of the Intestinal Canal, generally of the colon or Rectum, and is characterized by pain & tenderness of the abdomen, tormina & tenesmus, with bloody & mucous dejections. It is often ushered in by a sense of lassitude, want of appetite, nausea, bad taste in the mouth, depressed pulse, thirst, dry skin, transient pains in the bowels, constipation & occasionally diarrhoea. Sometimes the attack is more sudden, especially if it be occasioned by some irritant acting immediately on the mucous coat of the bowels. In general the fever is first in the order of symptoms, though it is also often otherwise, the tormina or diarrhoea, the tenesmus or bloody & mucous dejections preceding it. Sometimes the stools consist almost entirely of intestinal mucous; in other cases blood is discharged with it, and at times they are composed chiefly of blood. The tenesmus is one of the most characteristic symptoms of the disease and from the violence of this distressing attendant, we may form some idea of the extent and danger of the internal inflammation. A constant soreness is felt over the bowels, and immediately before

the urgent calls to stool, a severe tenesmus is experienced. When the disease continues a long while unsubdued, all the indications of extreme prostration, and typhoid debility, arise in succession. Emaciation progresses rapidly, until a colliquative diarrhoea accompanied with great anxiety & restlessness, or liquid dark & offensive stools. hippocratic countenance, cold extremities, and a moist clammy condition of the whole surface of the body, announce approaching dissolution. The tongue is covered with a white fur, becoming brown rough & dry with red & moist edges, as the disease advances. In the chronic form of the disease, the whole surface of the tongue is often smooth, clean & red; or red & granulated, like raw flesh. There is always a great torpor in the hepatic & cutaneous functions, the faeces being free from bile, and the skin obstinately dry during the active period of the disease.—

Causes. In consequence of the relaxation & debility which are produced by high atmospheric temperature, Dysentery occurs more frequently in Autumn, than any other season of the year. The intestinal canal partakes largely of this—

loss of tone & debility of the whole system, and is then more easily irritated, & thrown into inflammatory action by the supervention of any additional exciting cause; we regard heat, therefore, as the great predisposing cause to Dysentery & other affections of the mucous membrane of the Stomach & intestines. Malaria or as it has been called Koino-Miasmata is also frequently associated in action with high atmospheric temperature, in reducing the animal frame to that state in which it so readily falls a prey to disease. Whether paludal exhalations alone are capable of producing dysentery, unless by rendering the secretion of bile sufficiently acrid & irritating to inflame the bowels, is still doubtful; but the modifying influence which they exert over the disease is so plainly marked, that its participation is fully established. In fact, in places where these two causes are combined, we frequently see cases partaking of the nature of Bilious Remitting Fever, and pure Dysentery; and sometimes the same patient will suffer from Intermitting fever, and Dysenteric symptoms, alternately. In such cases the cutaneous exhalents-

have long been in a state of inordinate excitement from the stimulus of heat; whilst the Biliary secretions and also much increased by the same cause, powerfully aided by malaria, In this state of strong predisposition to morbid action, let us suppose that a sudden depression takes place in the Thermometer, or the individual incautiously exposes himself to the chilling effects of a damp, & cool current of air; the condition of the circulation is immediately changed, the cutaneous exhalents become paralyzed, a retrocession of the fluids takes place from the external surface, to the mucous membrane of the intestinal canal, where inflammation is speedily developed; whilst the liver, in common with other internal organs, becoming engorged with blood, will not only itself suffer great functional derangement, but by the obstruction thereby occasioned in the whole portal circulation, will aid directly, in the production & aggravation of intestinal inflammation. To be still more explicit on this point, we will recapitulate, in a few words, what we have already said. The ordinary cause

of acute Dysentery, in all its varieties of location, is suppressed perspiration, acting in conjunction with the predisposing causes of high heat, & Malaria or of atmosphere varying rapidly from heat to cold, from moisture to dryness. How, or why it is that this cause exerts its influence upon the large intestines, rather than upon any other cavity; or produces Dysentery, rather than Diarrhea, or Cholera, or Cholic, we are incapable of — determining: But the daily experience of every one is sufficient to demonstrate the fact, that sudden chills on the surface are possessed of a revellent power, which throws the action lost on the skin, upon various internal organs, and especially on the cavities of the mucous membranes, which in consequence of this excitement become inflamed & pour out vitiated & additional secretions, —

We do not, however consider Dysentery as always produced in this way; we are well aware that it frequently appears — when these causes are entirely wanting, as in places which we should not suppose Malarious,

and in winter, when the atmospheric temperature is too low to give rise to vegetable putrefaction, we have then only to call into our aid some powerful irritant of the internal surface of relation, or a greater degree of cold, or a more sudden abstraction of heat from the body than was supposed necessary in the first case, to enable us to account satisfactorily for the developement of the disease, Unfortunately there will be found too many of this kind among the direct, exciting, or sporadic causes of the disease, Of these we may enumerate large draughts of cold water, or eating confectionary ices when the body is much heated by exercise or otherwise, In this instance we suppose that the bloodvessels of the part subsequently affected are debilitated by the application of a degree of cold far below their actual temperature; and when thus weakened, they become the seat of congestion, a remora takes place in the course of the blood, which by the distension it occasions if the blood vessels, still further weakens them, so that when the reaction which always follows this stage, takes place, they no longer possess

that elasticity or tonicity, & vital resistance which are necessary to the continuance of their healthful physiological action, unripe fruits, indigestible & unwholesome food, impure water, and irritating articles of all kinds received into, or generated in the bowels, by debilitating the bloodvessels thereof, and causing them to become as it were a centre of fluxion, on the principle, "ubique irritatio, ibi est fluxus" seems to induce the condition above alluded to, which may be regarded as the first degree in the scale of pathological action, which constitute the disease. If there be then any original or acquired defect in the organization of the part, or if the irritation already established be aggravated by a repetition of the same cause, or by the use of stimulants, drastic cathartics &c, the transition from this stage, to that in which all the symptoms of the disease are fully developed, will speedily & inevitably follow. Dr. Cullen regarded scyballa as a frequent cause of this affection; but the truth of this position has been successfully controverted by Dr. Johnson, and is in fact, in a large majority of cases, contradicted by actual

experience, no deyballa being discharged at any period of the disease.

With regard to the contagious or noncontagious character of the disease, there is still much diversity of opinion in the profession; and tho' it has given rise to frequent controversies, "adhuc sub judice lis est." Much may be said on both sides, and while many physicians of high standing have maintained the affirmative, others of equal celebrity with an array of facts & arguments equally convincing, insist upon the negative, Dr. Cullen says the disease is always contagious, and that the contagion is at all times specific, an opinion in which he is partially at least supported by Drs. Parr, Young, Chisholm, Cheyne, Pringle, Balfour, Good & others. On the other hand Dr. Armstrong thinks that it is never propagated by an inherent principal of contagion, Sydenham, Willis and Bateman did not believe it to be contagious; and Johnson, Ballingall, Campfield, L. Frank, Renton & Professor Potter of the University of Maryland either deny altogether the existence of such a

principle, or have not met with any instance of it in their own practice. Dr. O'Brien of Dublin has never found the disease decidely contagious, but supposes such a thing possible, when the disease is epidemic, and the accompanying fever, in camps or other crowded stations, assumes a malignant or typhous form. This is in some measure a compound of the two opposite creeds. It is probably nearest the truth, and is that to which we are disposed to adhere. To propogate any disease by contagion, there must be a specific virus, the product of morbid action, contained in some of the secretions or excretions, and generated in a body labouring under the disease. We do not believe that any such poison is generated in Dysentery. The experiment of Dr. Potter who injected the dejections from a patient in the worst stage of the worst form of the disease, into the bowels of a healthy individual without communicating the disease, amounts almost to a demonstration on this point. But it seems not improbable that an atmosphere highly charged with noxious & offensive effluvia, generated about the sick, in ill ventilated & crowded —

apartments, together with loss of rest, the influence of the depressing passions, as fear, anxiety, &c in those connected with hospital establishments, by impairing the general health, and thereby lessening the resistance which the human system always opposes to the first aggressions of disease, might have no inconsiderable share in its propagation.

Post mortem appearances. The appearances after death, confirm the views above given as to the pathology of the Disease. until within the last twenty years, it was not suspected that inflammation of the mucous membrane was the essential pathological condition of this affection. Richter, Stoll, Akenside, Vogler & many others considered it as a Rheumatic or Catarrhal affection of the bowels; whilst Recamier on the other hand referred all the symptoms to the presence of vitiated & acrid secretions in the bowels, and regarded the inflammation, which was too obvious after death, to be denied, as a merely accidental consequence thereof. Dr. Cullen considered a preternatural constriction of the Colon, to be the proximate cause, without ever suspecting that

inflammation to a greater or less extent was invariably present; It is unnecessary to enumerate all the changes which result from the continuance of this disorganizing process: suffice it to say, that they vary from the slightest blush of redness occasioned by the increased vascularity of the parts, to extensive ulceration, gangrene & perforation. In some instances these alterations will be found only in the Colon & Rectum; in others there will be a phlogosis, either continuous or in patches, of the whole intestinal tube from the Duodenum downwards; tho even in these cases, the Colon & rectum sustain the principal violence of the disease. At times the bowels become perforated by gangrenous sloughing, and their contents escaping into the cavity of the Peritoneum, the patient is seized with sudden & alarming prostration, & dies of Peritonitis. The liver always suffers great functional derangement, and when the disease is Epidemic; in hot & insalubrious countries, more or less organic derangement, the usual consequence of inflammation in that organ, are frequently to be found.

Prognosis. Copious discharges of

blood from the bowels are not so unfavourable, as would be supposed, because, perhaps, it acts as a local depletion of the parts diseased. In fact such cases are always more tractable, than those in which mucous, merely streaked with blood, predominates in the dejections. Colliquative & fœtid stools, in the advanced periods of the disease, indicate much danger. Another symptom highly unfavourable, is a tympanitic state of the abdomen, more especially when attended with discharges of a mucosanious fluid. When the stools assume a more natural appearance and are mixed with bile; and especially if the tormina, tenesmus & tenderness of the abdomen begin to abate, at the same time that a gentle diaphoresis occupies the skin, we may regard the disease, as rapidly declining.—

Treatment. According to the pathological views given above, the principal indications to be pursued in the remediate management of the disease, are 1st To moderate the febrile reaction of the heart & arteries. 2d: To restore the regular action of the liver & skin, & 3d: To

subdue the local inflammation of the bowels. The first will be accomplished by general bleeding, carried to an extent proportionate to the violence of the irritated vascular excitement; the second, by mild purgatives, especially Calomel & Castor Oil, combined with Opiates, Diaphoretics &c; and the third by local bleeding, blistering, fomentations, soothing Enemata &c.—

But little need be said as to the priority or comparative importance of these indications. They are arranged in the order, in which they will generally require to be met, after the disease is fully developed: But they are inseparably connected & mutually subservient to each other; and should all be kept in view during the whole course of the disease; for if we succeed in any one of them, we at the same time will facilitate the accomplishment of each of the others. — Thus, as high arterial excitement never fails to aggravate local inflammation, and is incompatible with the regular performance of the functions of the liver & skin, by adopting general bloodletting as a means of moderating this excitement, we indirectly

contribute to the removal of the other symptoms. According to Dr. Armstrong, this is one of the most successful remedies, in shortening the duration & lessening the fatality of the disease, and it should be promptly & efficiently performed in all severe cases. It will be found to lessen the tormina & abdominal tenderness, and reduce the system to a condition more favourable to the operation of other remedies. Of course in determining on the propriety of this evacuation, and the extent to which it is to be carried, it will be necessary to bear in mind, that the ~~accom~~ accompanying fever is sometimes of the typhoid type, in which case, it would be altogether inadmissible. Blood should then be taken by cups or leeches from the parieties of the abdomen. The character of the epidemic, if it prevails as such, and the types of other prevalent diseases, will afford us a guide in this respect, and the diathesis of the individual, as well as the time that has elapsed from the commencement of the attack, will also influence our decision.

As soon as the general momentum of the circulation has been sufficiently-

reduced, local bleeding by cups & leeches, should be promptly & adequately practised, The necessity for its repetition will be determined by their effect in mitigating the tormina, tenesmus & tenderness of the abdomen. After they are removed, an emollient poultice or fomentations may be advantageously applied.

Formerly, purgatives, even of the more drastic kind, were administered freely in this disease, for the avowed purpose of dislodging & evacuating Scyballa; which as we have seen already, are merely an accidental concomitant of the disease, and in many cases had no existence, In a majority of cases this practice could not fail to be injurious: and accordingly, purgatives are now expunged from the list of appropiate remedies; and instead thereof, the mildest laxatives alone are resorted to. Even these, being calculated to increase mucous irritation, to some extent at least, might be advantageously omitted, were it not that the secretions deposited, in this disease, in the intestinal canal, are highly acrid & irritating; and unless removed from time to time by these means, would increase the violence of the disease & the sufferings of the patient.

For these reasons, Castor oil & Calomel are generally considered as among our most valuable remedies. The latter may be given in the very commencement of the disease to the extent of 10 or 15 grs at a dose, & followed in a short time by Castor oil; after which if the tenesmus is troublesome, an anodyne as 10 gr. Pulv. Doveri, or 20 or 30 gt. Tinct Opii may be given; or they may be united in the same prescription with the purgative, a combination which is especially useful in cases attended with severe pain & soreness of the abdomen. In the Dysentery of Hot climates, Calomel is indispensable, and should in all cases constitute a portion of our laxative remedies. Dr. Johnson gave it in scruple doses with the happiest effect; though as the disease occurs in temperate latitudes, we can accomplish our object with smaller doses. From 3 to 5 grs. Prot. chlo. Hydrarg. combined with opium or Ipecac or Tart Antim & Potas. may be continued at suitable intervals, until there is some evidence of the calomel producing a slight constitutional impression; after which the disease will generally rapidly subside. In chronic Dysentery, Rhubarb on account of its

tonic & astringent properties, may be occasionally used with considerable advantage; and Cremor Tartar, according to Dr. Cheyne, has saved patients, who he thinks would have died under any other mode of treatment.

When the disease is accompanied with evidences of congestion in the abdominal organs, Emetics will sometimes be useful. They are indicated when the tongue is covered with a brown fur along its middle, and there is much nausea and bilious vomiting; they are admissible, however, only in the commencement of the disease. They give a centrifugal direction to the fluids, relax the surface of the body, and by the concussion which the act of vomiting produces in the sub-diaphragmatic viscera, give activity to the portal & hepatic circulation, which are always more or less embarassed. For this purpose, the Cerated glass of Antimony was formerly used; but it is now abandoned on account of the harshness of its operation. As Ipecacuanha is mild & certain in its operation and possesses the property of allaying intestinal irritation, and increasing, rather —

than impairing the tone of the Stomach, this is preferable to all other emetics.

After the general excitement has been moderated by suficient general & local depletion, and the bowels evacuated by mild purgatives, Diaphoretics in conjunction with Calomel, will be found to be valuable curative means. The Skin is always hot & dry in this disease, and the restoration of of its suspended function, either by sweating or a more gentle diaphoresis, has therefore been generally considered as an object of importance. Perhaps no article of the Materia Medica will fulfil this purpose as well as the Pulv. Ipecac. Compos.—— Dr. Eberle speaks highly of the effect, of the powdered root of the Asclepias Tuberosa, in combination with Ipecac. & Opium; but it is not unlikely, that this prescription owed its efficacy to the two last articles combined with it. A combination of Calomel, — Opium, & James powder, has been also much praised by Drs. O'Brien & Johnson. The free use of warm diluents, & mucilaginous drinks as solution of gum arabic, Barley water, flaxseed tea, infusion of slippery elm, of althea &c should be

directed during the whole course of the disease, & especially during the administration of Diaphoretics. It has been already stated that Calomel & opium either seperately, or in combination, are among our most excellent remedies in the disease. On the authority of Dr. Cullen, the use of Opium was formerly entirely prescribed. Sydenham however, previous to him, had a much more correct opinion of its real value. In fact, it is now considered indispensable to the comfort of the patient & when judiciously administered it will greatly contribute to the speedy resolution of the disease. When the opium is contra-indicated by idiosyncrasy, the black drop or the salts of Morphia may be used in its stead, they possess all the soothing, without the stimulating properties of Opium.

Nitrous acid is much used in India, and generally, it is said, with much advantage. Dr. Hope of Chatham gave it in combination with opium & camphor, and such is his opinion of its virtues, that he has continued the habit of using it for the last twenty years. - Dr. Eberle relates a case in which the Pyroligneous acid was used by him with marked success. ——— ———

In the advanced periods of the disease, astringents may sometimes prove serviceable. The acetate of Lead, in combination with opium & Ipecac is the most valuable article of this class. The sulphates of Copper & Zinc, in small doses, have been used when chronic ulceration is suspected to exist. But in general, in the early stages of the disease, all astringents & especially, vegetable astringents, to which nurses & attendants are too prone to resort, will be not only useless, but decidedly injurious. In warm climates they are much better borne, than here. After, however, a slight mercurial action has been gone through, and the inflammatory symptoms have subsided, and there are still morbid secretions & evacuations, this class of remedies may be administered with a seasonable prospect of benefit. The decoctions of Cascaria Febrifuga, Logwood & geranium maculatum may then be tried.

Charcoal, combined with Dover's powder proved of much service, when used by Dr. Abercrombie in a severe case of this disease. According to the experience of Dr. Reed of Dublin, the Hydrochloruret of Lime also deserves attention as a

remedy. —

The nux vomica, or its alkaline basis — Strychnia, was formerly much used in Germany. The powerful narcotic properties of this article, may occasionally be useful after due depletion; but as opium will proberly produce all its good effects, & is a much safer remedy, it should always be preferred.

Tobacco has been used, in the form of enemata, with much advantage by Dr. O'Brien. It is said to moderate the action of the heart and arteries, to allay intestinal spasm, promote free purgation, relieve tormina & tenesmus, & restore the free action of the cutaneous exhalents. —

When the soreness on pressure, & pain in the abdomen have resisted the operation of other means, as cupping, leeching &c, a large blister will sometimes give much relief. Dr. Eberle, however, gives a preference to fomentations and Emollient poultices, especially in children. In chronic Dysentery, Stimulating Embrocations may prove serviceable, and a broad flannel roller should in such cases be constantly worn tightly —

around the body. —

In chronic Dysentery, unattended with much general febrile excitement, the Terebinthine remedies, as Balsam Copaiva, & Ol. Terebinthinæ will often prove decidely beneficial. In this state, Dover's powder in small doses, with prepared chalk is very useful; and we may also occasionally use with good effects some of the vegetable astringents, particularly Logwood, or the Geranium maculatum boiled in milk, or the Cusparia Febrifuga.

During the whole course of the disease whether acute or chronic, Emollient Enemata — should be thrown into the Rectum several times daily; and a full dose of Laudanum should be added to them — whenever there is much tormina & tenesmus. — Mucilaginous drinks should also be freely allowed. of these the most useful, probably, will be obtained by decoction from the pith of Sassafras or the Bark of the Slippery Elm. During the active stages of the disease, all kinds of solid food should be strictly prohibited; and when the patient is convalescing, the greatest care, in regard to diet will be —

necessary. He should especially avoid crude and indigestible vegetables, or unripe fruits; and should subsist principally on Rice, Barley, Oatmeal gruel, arrow Root, Sago, or Boiled Milk. Infusions of some of the milder vegetable tonic astringents will contribute to the speedy restoration of his health. For this purpose the Logwood Bark, or the cusparia Febrifuga, with nitric acid, may be used.

Shedd.

by Christopher M. Rabourg
of Baltimore.

An Inaugural Thesis,

on

Variola Vaccina;

Submitted to the Medical Faculty
of the
University of Maryland,
for the degree of

Doctor of Medicine;

by

Christopher H. Rabore,

of Baltimore,
Maryland

Febry. 1837.

Introduction.

In offering to the Medical faculty of my Alma Mater a treatise on a subject connected with Medicine, I do it reluctantly, Knowing my inability to advance any claims to originality; to comply, however, with a law of the University, I propose to give a description of the Vaccine disease, as a prophylactic to that distressing and often fatal malady the Small Pox. — While offering my remarks, I cannot refrain from tendering to the Medical profession, & indeed to humanity, my congratulations for the benefit to the human family of so great a blessing, however humble it may be in its origin, or however simple in its character on the System. The simple fact of its powers in preventing Small pox, speaks volumes in its utility,

Variola Vaccina, or Cow Pox, may be defined; a disease, of a pustulous character, which affects the Cow, and which, by inoculation into the human system, exerts a prophylactic influence; destroying the susceptibility to Small Pox. It may be urged that many persons have had the latter disease notwithstanding they were previously subjected to the former; and it may be urged, also, that the Small pox has occurred in individuals who have before been attacked with itself; indeed the testimony of many respectable physicians would sustain the fact; nevertheless; I am of opinion that the variola vaccina, when genuine, is as certain a preventive of Variola as an attack of the latter disease

would be to fortify the System against a subsequent attack of the same disease. It would be folly, here, to speculate upon the theories of the very of the very distinguished members of the medical Profession who have devoted their time and talents to the investigation of these subjects; I will merely add, that it should be the duty of all Physicians, where opportunities are offered, to be careful in using such Vaccine matter alone as they had the strongest evidences of its genuineness. By these means Variola Vaccina would be more certain to fulfil the indications desired, and the Confidence of the public, as well as of the Profession, would be better secured. Would it not be well to repeat the vaccination until it was duly ascertained that

the System could no longer be constitutionally impressed by it? Some forty or fifty years ago this disease attracted attention as a pustular eruption derived from infection, chiefly shewing itself on the hands of persons who had milked cows affected with the disorder, This was found to secure persons from the Small Pox; and so remarkable was the confidence, at that time, in its prophylactic virtues, that a person was treated with ridicule who attempted to convey the small pox to one who had been previously infected with the Cow pox.

In the year 1798 was published to the world the result of the successful experiments of Dr. Jenner, of Gloucestershire; - the first publication, of which we have any knowledge upon this very interesting, and no-

less important subject. Previous to his publication, however, the fact was noticed, and artificial inoculation with the vaccine matter successfully practised in an instance which was formally communicated to Sir George Baker, by a farmer named Nash; nevertheless, the honor of maturing the investigation, and of first introducing the disease into general notice, was left to immortalize the labours of the ingenious Jenner.

Though at first foiled by not distinguishing between the genuine Cow pox and an ineffective modification of it, (A spurious disease of nearly a similar appearance, to which the same animal is subject, but which is not a prophylactic against Small pox) his perseverence enabled him to overcome all difficulties,

And, the result is known to all; for vaccine inoculation has passed, with rapid progress, from the arctic Circles to the extremes of Asia and Africa. A variety of opinions have been expressed respecting the origin of the Vaccine disease. Dr. Jenner at first ascribed its source to the grease, of horses, a disease about the heels of the Animal, which is accompanied with a sanious discharge, which fluid Dr. Jenner discovered to affect the human System in a manner precisely similar to that produced by inoculation with the Cowpox virus; and to afford the same happy emancipation. He conceived the sanious fluid of the grease to be the original disease, & the cowpox the result of a casual inoculation, transmitted by means

of the udder of the Cow coming in contact with the Sanious fluid, previously dropped from the horse on the ground; and he endeavoured to show the identity of the fluids, by the identity of their effects upon the human System. a pustular disease similar in its character and properties is said to affect animals of the Sheep Kind; showing itself, generally, about the mouth & head of the animal; and, that an inoculation with Small Pox matter will prevent, in them, a development of this disease.

Many respectable Physicians bear testimony to the identity of Cow-pox and Small pox matter; and among them is Dr. Bamann, of Lyons. This gentleman, in a treatise on the Subject, read at the French Academy of Medicine in 1830, states, that the matter

of Small pox, if mixed with the fresh milk from the cow, produces, when inoculated into the System, an eruption similar, in all respects, to that of the vaccine virus; and, that inoculation with this matter will answer every purpose for the production of the usual vaccine disease.

In the inoculated Cow pox from genuine virus, the pathognomonic signs are the following;— the vesicle is single, and confined to the puncture; cellulose; bluish brown in the centre, fluid clear and colourless to the last; pustule elevated in its margin and depressed or indented immediately in the Centre, and concreting about the twelfth day into a hard, dark or mahogany coloured scab.

When the virus inoculated is not of the genuine kind, the inflamation

commences earlier, say about the second day, the skin considerably elevated, resembling a phlegmonoid tumour, irregularly circumscribed, not depressed in the centre, and contains an opaque purulent matter. — In the spurious vaccination scabbing commences as early as the fifth or sixth days.

According to Dr Willan, the vaccine vesicle is to be regarded as imperfect, when: first, though perfect in its form and appearances, it is without an areola on the ninth or tenth day. — Second, when the vesicle is very small, pearl colored, flattened, with a hard, inflamed, and slightly elevated base, a dark red areola, and without a round-~~ended~~ or prominent margin. Thirdly, when the vesicle is small, pointed, with a very extensive pale-red areola.

According to the same writer, the

Spurious disease may, be produced; First, by the genuine virus acting on the System when affected when affected with some cutaneous disease; Secondly, by vaccinating with matter which has undergone more or less decomposition by keeping; Thirdly, by vaccinating with matter taken from a Spurious pustule; and Fourthly, by the genuine vaccine matter being controlled, or in some way diverted from its regular operation by idiosyncrasy, or a depraved condition of the System.

The following are the Symptoms of the genuine variola vaccina;— The disease is introduced into the system by inoculation.— Towards the close of the second day after the insertion of the virus, a small point of inflamation may, usually, be seen where the puncture was made. On the third day this

point is more distinct; on the fourth, it generally assumes the character of a small pimple, encircled by a very faint and narrow inflamed basis or areola.

This pimple now gradually enlarges, and on the fifth day begins to assume a perfectly regular and circumscribed form, with a flattened surface, and a small depression at the centre, somewhat darker than the rest of its surface; an appearance which it preserves throughout its whole subsequent course.

About this period also, the vaccine pock changes from the pimple to a vesicle, containing a limpid fluid.

From the fifth to the ninth day — the pock continues to enlarge in its circumference, but not perceptibly in elevation, so that its flattened appearance becomes more & more conspicuous, —

About the ninth day the pustule is

at its full state of maturity, and it is at this period that the constitutional symptoms, (if any occur) begin to show themselves. In some instances the glands of the axilla becomes painful and swelled, and a state of general languor & drowsiness, with slight creeping chills, and alternating flushes of heat, occur. Frequently, however, no constitutional symptoms whatever supervene.

About the eighth day, the slight circle of inflammation which surrounds the pustule in its early period begins to increase, until, by the tenth or eleventh days it forms a broad and beautiful areola around the pock. By the eleventh day, the centre of the pustule, which is slightly depressed, begins to assume a darker appearance, and this darkness gradually extends towards the circumference, so that by the fourteenth day the surface

of the pustule is converted into a brown scab. This scab becomes darker & darker, until it acquires a deep mahogany appearance. In a few days more, the scab begins to separate at the circumference; still, however, retaining its attachment in the middle; and eventually falls off, generally on the 16th day from the time of vaccination, leaving a slight depression in the skin.

It is a curious & interesting fact, that the vaccine disease occasionally counteracts or removes other affections of a chronic character, particularly chronic cutaneous diseases. In the report of the French committee just referred to, it is stated that "thirteen medical men have seen examples of vaccination proving the means of curing other eruptions, more especially the crustea lactea;" and fully authenticated

instances are recorded of the removal of Scrofulous swellings, Ophthalmia and Whooping Cough by vaccination. Of the power of the vaccine disease to moderate and abridge the course of Whooping Cough, I have myself witnessed several Examples.

An

Inaugural Dissertation

on

Cholera Infantum

Submitted to the consideration of

The Provost Trustees and Medical Faculty

of the

University of Maryland

For the degree of Doctor of Physic

by

Charles S. Boarman

of

Baltimore

Maryland

on the day of March

A.D. 1837

To

Richard Wilmot Hall. M'D
Professor of Obstetrics and Diseases of Women
and children in the.

University of Maryland

Dear Sir

With pleasure I embrace the opportunity of expressing my most sincere acknowledgements to you for the particular attention and valuable instruction received from you during my medical pursuits under your direction. In return for which, I hope you will accept my best wishes for your present and future happiness.

Your obliged friend and greatful Pupil

The Author

Cholera Infantum was unknown to the aborigines of our continent; and the first settlers of the colonies have left us no record of its existence. It was not until towns and villages formed an aggregated population, and more especially since they have grown into populous cities, that cholera has been engendered. It had no "local habitation or a name," even in the southern and middle states, till it was described by Doctor Rush, in the year 1773, and was copied from his written account published in 1777. Since that time it has been observed on a larger scale, and has been extended to the plantations and farms in the southern and middle states. In its country localities, according to Dr Potter, it has uniformly increased in the ratio of the insolation of the soil. The first settlements, which were soonest cleared of woods and underwood, and therefore most exposed to solar heat, were the first seats of Cholera infantum. This disease occurs about the last of May generally, and continues until the last of August or September, though from

the premature heats of summer, it may occur much earlier, The disease becomes most prevalent, and is attended with symptoms of the greatest danger, during the warmer months of summer, June and July, as may be perceived by the bills of mortality during these months. The temperature of the weather, has a very considerable influence on this disease. Sudden and long continued rains, after a very dry state of the atmosphere generally favour the operation of the exciting cause: hence in some years, it proves so alarming and distressing, whilst in others, from the mild and more uniform temperature of the atmosphere, it is comparatively of rare occurrence. A fall of four or five degrees of the thermometer, after a rain, which is usually followed by a western wind, not only suspends the action of the remote cause, but is salutary to the sick, who unless in the extremity of illness, revive from a state of prostration, and so long as there is no increase of heat, the number of cases invariably diminishes. Corresponding with these facts, while the

number of cases is stationary, or increasing in all June and July the longer and cooler nights of August curtail the bills of mortality, 'till the disease is obliterated, by the gradual diminution of heat in autumn. Although this complaint may attack children of any age, we find that it affects them more frequently during the second summer after birth, and is not only less likely to occur ~~but is then~~ during the third or forth year, but is then less dangerous. It is not unfrequently preceded by the same premonitary symtoms that follow the common billious remitting fevers. It comes on and is continued with evident symptoms of pyresia, loss of appetite, occasional nausea, and sometimes vomiting without the purging, but more usually the contrary. It most frequently comes on with violent purging and vomiting, which continue either together or alternately. It is also in many cases, especally when more mild, a mere chronic affection commencing with a diarrhea, inconsiderable fever, and but little affection of the stomach, the child gradually resting easy.

The dejections from the stomach at first consist of the ingesta, mixed in part with a vitiated secretion of the stomach, which sometimes contains an acid, and is frequently tinged by the colouring matter of bile with a thin watery fluid which is secreted by the liver and intestines, which is entirely perverted from the quality of bile in health. The alvine excretions are as various as those ejected from the stomach according to the existing condition of the liver. With an abundant acid, both the dejections from the stomach and intestines are blue, or inclined to purple, often resembling a solution of indigo. Sometimes in violent cases, where the disease has run to a considerable length, some degree of tenesmus will ensue. Worms are often discharged in different stages of this disorder; but are to be considered as accidental, having no agency in causing the disease. The symptoms enumerated, are accompanied with a high degree of fever, it sometimes remits every other day, but is most generally continued. The pulse in the commencement

of the disease, is sometimes quick and very tense, full, and hard. In many cases the pulse is weak and frequent from the begining, especially where the case is slow in its progress; but in the advanced stage of the disease, from the excessive evacuations, it soon loses its force and becomes weak, frequent, and quick; the skin becomes dryer and less elastic, the process of absorption commences in the muscles, and their power of contractility is diminished, the eye looses its lustre, and the extremities becomes cooler as the blood recedes from the extreme vessels, especially those more distant from the heart. The child becomes fretful and restless, and its sleep is interrupted and imperfect, or it is disposed to coma, if the brain be the more diseased organ, and a disposition to convulsions is discovered by frequent and sudden subsultus. With these symptoms, and in some earlier in the forming state of fever, the stomach and intestines show the deep concern they feel, by ejection almost every thing taken into them. One of the most frequent and distressing symptoms, in this formidable complaint is a severe pain or

griping in the bowels: this may be known by the child starting, by frequent fits of crying, and the forcible contraction of the arms and knees towards the epigastric region. The duration of this disease is various depending much on the manner of its access, the habit, changes of weather &c. The disease is seldom preceded by a chill, which is indicative of a more violent attack. If the first attack be violent and left to nature, all the alarming symptoms increase and the strength of the patient is suddently diminished, a fainting comes on attended with cold extremities, cold sweat and subsultus tendinum, which often put an end to the unhappy little suffer in a very short time. A hot, dry and moist atmosphere seldom fails to encrease all the violence of the disease, whereas a cool day frequently abates its violence, and disposes it to a favourable termination. It continues in some cases, with but few alterations, for five or six weeks, before any considerable change takes place, when the symptoms become more numerous and distressing: the body becomes emaciated to such a degree, that the bones, in

some cases almost protrude through the skin: a constant inclination to stool takes place, though but little matter can be voided, and that is of a watery or green colour; the eyes become languid and sink within their sockets; the features are contracted, livid spots appear, in a few cases, and in others eruptions in the mouth and fauces. hickup and convulsions, generally precede the fatal termination of the disease.

Diagnosis

The diseases with which Cholera infantum may be confounded are, hydrocephalus internus, dysentery, and affections arising from worms in the alimentary canal. To distinguish it from hydrocephalus internus, it is necessary to remark, that the pulse in the latter generally continues more full, tense and frequent, and the evacuations, when they do occur, are not so copious, nor accompained with any discharge of bile. It is more frequently attended with an obstinate pain in the head, pupils dilated, strabismus, and preceded by or accompained with a constipation of the bowels. It is distinguished from dysentery, by the apperance of the discharges being

more bilious; and being seldom accompanied with blood; and from from the latter being a more rare occurence among children. Cholera Infantum may be distinguished from affections arising from worms, by the symptoms of worms, such as a slight cough, the picking or rubing of the nose, tumefaction of the uper lip &c

Prognosis

In most diseases it appears to be an arduous task to lay down decided and unequivocal prognostic symptoms; as patients have recoverd under the most discouring circumstances; ~~which others have died~~ whilst others have died when the more favourable prognostics were present. Under these impressions, I feel a delicacy in attempting to say much on this head; but it is natural to conclude that where this disease attacks a very delicate habit in hot dry weather, when the vomiting is excessive, the stomach and bowels so extremely irratable as to retain nothing taken into them, with a weak quick or irregular pulse, and cold extremities, we may inform the parents or nurses, that life is suspended as by a thread, and that

probably the child will not do well. On the contary, when the symptoms are more mild, when the vomiting can be restrained or suspended, and when the fever and thirst are not very great, with a slower and more regular pulse, we may encourage them to have ~~patience~~ confidence, for it is probable the patient may do well.

Predisposing Causes

Predisposition is that state of the body which renders it susceptible of the operation of the exciting cause. This predisposed state of the system. I believe to be debility of the indirect kind, produced by heat on the infantile system. What palpable cause can be assigned in early summer so obvious as the overwhelming influence of a high temperture, upon the exquisitely sensitive nervous system of children. The causes which produces a morbid state, particulaly of the bowels and stomach is debility of the parts, which occasions a greater aptitude in them to be acted upon by the exciting causes, and may arise, from hereditary disposition, or weak organization. A particular irritable state of the stomach and intestines, arising either from naturable conformation,

or a debilitated state of the body, more especially when this causes particularly in the stomach and intestines; irregularity in diet.

Exciting Causes

As debility is the predisposing cause, and places the system in a very excitable state, the exciting cause must be stimulants, which are all such as induce fever, and which may be considered as the primary effect. The exciting causes may be arranged under the following heads. An increase secretion of bile. Aliments offensive from quality or quantity. The sudden stoppage of perspiration. Sudden repulsion of eruption on the skin. Eating unripe fruit or meat, while at the breast; Also improper diet taken by the mother during lactation may induce the disease

Treatment

As I did not conceive it necessary to thake a diffseperate view of the different theories laid down by the different writers on the subject, I shall not at present notice their different modes of treatment. Most

of the physicians have agreed, that the first and most important step towards a cure, when circumstances will admit, is, to remove the patient from the city, to some healthy part of the adjacent country, where medical aid will scarcely be required. From what has been said in relation to the pathology of this affection, it would appear that the torpor of the liver and skin, in connexion with cerebral irritation, constitutes the immediate cause of the excessive irritability of the stomach and bowels. Our principal object, therefore, must be. to restore the two functions: to obviate irritation and sanguineous congestion in the brain: and to determine the blood from the engorged vessels of the liver and mucous membrane of the alimentary canal. In all the higer degrees of fever where the pulse is tense, however small or frequent, bleeding from the arm may be nessary, but cups or leaches are prefered. Emetics are recommended by some in the treatment of this complaint, though in the higher degrees of local affection, they manifestly increase congestion, and add fuel to the

flame. In cerebral affections, they impel the blood into the brain, and foment the symtoms, while they waste the corporeal powers, and render the action of the more appropiate means more uncertain. The intestines should be kept open by the use of gentle laxatives, such as manna, magnesia, and rhubarb. Calomel in small doses is recommended by Dr Potter as claiming a pre-eminence over all other remedies. Pied water, according to the experience of my preceptor Professor Hall, allays the irritability of the Stomach in an eminent degree. Blisters applied to the abdomen, after the bowels have been evacuated, are said to have performed a cure. When the spontaneous discharge from the alimentary canal has been considerable, when a prostration of strength, feblenefs of pulse, and coldnefs of the extremities are produced, we may conclude that the disease has already sufficiently, or toomuch, debilitated the system, and that all further evacuation, excited by artificial means, would be highly improper; recourse must then be had to the Calomel or blue mass, and mild tonic

diet to support the strength of the patient. The following mixture appears to be well calculated for that purpose; a few drops of laudanum, combined with prepared chalk, peppermint, or cinnamon water, to form a a julip. Sulphate of alumina, has been used with the greatest benifit. I have been told by my preceptor, that it has succeeded after all other remedies have failed. Small Clysters of flaxseed tea, or of starch dissolved in water, with a few drops of laudanum are often attended with a good effect. Injections of cold water, are recommended by ~~the~~ some of the most eminent physicians. Flannels steped in infusions of bitter and aromatic herbs, in warm spirits or madeira wine, and applied to the region of the stomach, often afford considerable relief. Sponging the surface, often with tepid brandy and water. Blisters applied to the arms, legs, and stomach, by inviting morbid action from the alimentary canal, are thought to be highly useful. When the violent convulsive action of the stomach and intestines is composed, the strength of the patient must be

supported by the use of tonic and cordial medecines, or by a removal to the country. The use of iced water throughout the disease was introduced by my preceptor in the year 1810 to allay the irritability of the stomach with great success. In the chronic form the red wines, or even the white wines, with rich diet ~~as~~ salted and smoked fish, or meat are the most useful tonics

An
Inaugural Dissertation
On
Cholera Infantum
Submitted to the Examination
Of the
Provost Trustees and Medical
Faculty of the University of Maryland
For the degree of Doctor of Medicine
By Walter C. Mead
Of Maryland
On the - of March 1837

Cholera Infantum

To discuss the subject of Cholera Infantum in a full and satisfactory manner would be beyond my ability, therefore I shall endeavour as far as my capability will allow, to treat of it in that manner as will gain the favour of the Faculty and applause to myself. It cannot be expected that I can throw any new light upon the subject, therefore I will leave it, for those, who are better acquainted with the science of medicine and whose experience and talents reaches far beyond comprehension. Therefore I shall take up the subject as it occurs to my mind and endeavour to treat of it accordingly.

Cholera Infantum is a disease, as I believe peculiar to this country and to hot climates, it very seldom or never appears in cold climates, It was unknown to the Aborigines of our continent, and the first settlers of the colonies have left us no record of its existence. It was not until towns and vilages were formed into an agregy-

-ated population, and more especially since they have grown into more populous Cities; that Cholera has been engendered. It was first observed in our Atlantic towns, which grew more rapidly and soonest became flourishing cities. Since that period it has been observed in a larger scale, and has been extended to the plantations, and farms in the southern and middle States. In its country localities, it has uniformly increased in the ratio of the insolation of the soil. The first settlements, which were soonest cleared of woods, and underwood, and therefore most exposed to solar heat, were the first seats of Cholera Infantum.

It is the general received opinion as I believe that Cholera Infantum is more prevalent in large and crowded cities than in the country, though it is not so common in those small narrow streets which is better protected from the direct rays of the sun, than other parts of the City. (Professor Potter.) This disease prevails mostly or entirely in the Spring

and summer, but more generly in the summer, occasionly however in the fall, it has been asserted by some that it is of a malarious origin, and that it is found to be very prevalent in miasmatic districts, this assertion however, I believe to be altogether incorrect, as it is generally produced, and exerts its influence upon the animal system before vegetable decomposition is produced, or malaria is generated in the atmosphere. Therefore it is quite manifest that heat, according to Dr Potter is the predisposing and also the exciting causes of this disease, heat unquestionably, by its deleterious influence upon the + and by bringing the system immediately under its influence, causes congestion of the Portal system, and hence the disease is produced. There are many considerations that lead us to conclude that malaria has no agency in producing the disease. Cholera appears, as the first indication of the diseases of summer, even in May when the impression of heat is strong and sudden, before the process of vegetable putrefaction can evolve any gaseous emanation. The process by

+ animal system

which the diseases of autumn are generated is much slower, and accordingly we find Cholera Infantum in full operation. While there is not an Intermittent or Remittent to be found, among the early cases of children, there are no intermittents or semittents in adults, except occasionally an individual who has carried the predisposition through the winter from the preceding autumn. The symptoms of the two diseases presents so many discrepancies, that they can be easily distinguished, The summer disease is never preceded by a formal chill, and never intermits. Even when it indistinctly resembles a semittent, it is not subject to distinct exacerbations, and is not mitigated by a periodical sweat. The type of Cholera Infantum is more continued, is attended by less heat, which is more diffused generally in the paroxysms of miasmatic fevers. The tongue is less changed in Cholera, and while it is white, is less prone to become brown or yellow than in semitting fever. I am inclined to believe with Professor Potter that heat is

the sole cause of this disease, and that no other cause will produce it unless the system has first been brought under its influence. The systems of children are so extremely irritable, and sensible to heat that it is seasonable to suppose them to be deeply affected by it, and to use Dr Potters own expression, and no other way can Cholera Infantum be accounted for. Heat has a powerful influence upon the brain and animal tissues, it operates on the capillaries, the whole portal system is deranged, the liver is implicated preceded by congestion, none of the articles of diet will produce this disease without the (sine qua non) heat. Dentition may produce the disease, but after the system has been operated upon by heat, eating unripe fruit will produce the disease under the same circumstances, and many other causes which have been said to have produced it, which I do not conceive it to be necessary to mention, as the before mentioned causes appears to be sufficient

to produce the disease under consideration.
According to the pathological researches of Professor Horner, Cholera infantum consists in an inflamation of the mucous glands ~~and~~ or follicles of the alimentary canal, and not in a common vascular or erythemoid inflammation of the intestinal mucous membrane, to summons it up in a word I believe it to consist in a chronic inflammation of the mucous membrane, with a congestive state of the liver, which is as I believe the opinion of Professor Potter.

Symptoms. This disease sometimes commences gradually, with distinct febrile symptoms, with more or less diarrhoe of several days continuance, after these premonitory symptoms have continued for some time, ordinarily, violent vomiting and purging ensues, frequently however severe vomiting and purging are among the first symptoms of this disease. The patient becomes pallid, the skin becomes dryer and less elastic, the eye loses its

lustre, and the extremities becomes cooler as the blood seceded from the extreme vessels, especial-ly those more distant from the heart. The child becomes fretful and restless, and its sleep is interrupted and imperfect, or it is disposed to coma, if the brain be the more diseased organ, and a dis-position to convulsions is discovered by ~~symptoms~~ frequent and sudden subsultus. With these symtoms, and in some earlier in the forming stage of fever, the stomach and intestines show the deep concern they feel, by ejecting almost every thing taken into them. It very frequently happens that the mothers milk is first rejected, and in many the evacuations are altered. There appear to be no bilious matter mixed with the discharges, they are generally of a white water colour. Intense thirst succeeds to this series of symptoms, and nothing is so grateful to the pa-tient as cold water, but does not quench the constant cravings of the patient. In this stage of the disease, the symptoms of fever are to be noticed by some increase of external heat, a

frequent pulse, and hurried respiration, which evin-ce the existence of congestion. This disease is liable to become protracted in its duration, or to assume a chronic form. The liver appears to be as inactive in this disease as in other forms of Cholera, for when once fully developed, the evacuations, during the early period of the disease, are wholly devoid of any appearance of bilious matter, consisting either of a whitish, frothy, or of a watery, and almost co-lourless fluid. If the disease does not rapidly exhaust the vital powers, and terminate fata-lly during the first few days, the patient begins to emaciate; the extremities become cold; the head and surface of the abdomen extremely warm; the skin dry and harsh; the countenance pale and shrunk; the eyes dull and sunk; and the pulse small irritated and frequent. If the dis-ease be not vanquished by proper remedial measures, the patient by degrees, becomes somnolent; he sleeps wi-th his eyes half-open; rolls about his head when awake, and after all sinks into a state of insensibility, and

Coma, and dies, under symptoms resembling those of the last stage of hydrocephalus. When the disease is very protracted in its course, aphthæ usually appear on the tongue and inside of the cheeks; the face acquires an œdematous appearance, the alvine discharges become so acrid as to excoriate the parts about the anus; and towards the fatal conclusion, spots of effused blood under the cuticle sometimes appear on various parts of the surface. The duration of this variety of Cholera is exceedingly various. It may prove fatal in five or six ~~days~~ hours; or continue for several weeks, and even months, until the body is reduced to a state of extreme emaciation, and yet terminate favourably. According to writers the majority of deaths takes place before the termination of the ninth day.

Post Mortem Appearance. When death takes place early in violent cases, the liver, and vessels of the mucous membrane of the alimentary canal are found on dissection, strongly engorged with blood; and where the disease had continued for some length of time before death, ulceration

and even abrasion of the lining membrane of the sto-mach and bowels; are usually discovered.

Prophylaxis. As heat appears to have the greatest influence in producing the disease, it wou-ld be necessary to guard against it as much as possible, this can be done by preventing its dir-ect operation upon the animal system, and to protect children as much as possible against all the visissitudes of the weather, which witt-out great care becomes exciting causes.

Every thing that effects an unusual excitement or diminution of healthy action, especially of the stomach, in this dangerous state of predisposion gives immediate occasion to the disease. The skin of children should be kept clean, that no obstru-ction to insensible perspiration may take place. To promote this object the child should wear fla-nnel both winter and summer, the dress should be so long as to completely cover the shoulders and extend considerably below the feet; and likewise no effluvium generated about the

-persons or apartments of children should be allow-
-ed to accumulate. Children should not be wea-
-ned in the months of June or July, the mother
should be very particular in her regimen, chil-
-dren should be bathed every night and morning
during hot weather, (Professor Potter.) they should
be prevented from eating acid or unripe fruit, for this
may excite the disease, so also may teething, when
this is the cause and gives rise to any unpleasent
symptoms the gums should be freely incised with
a lancet. Exercise is also very beneficial to the little
patient, the child should be caried out in the mor-
-ning whilst it is cool and pleasent, before the sun
has much power and also in the evening. Child-
-ren living in vilages and large Cities should
visit the country, and if it is convenient they
should remain in the country during the warm
season of the year, the best country seat for
them is one surrounded by a good many trees, so
as to protect the dwelling and round about it
from the direct rays of the Sun.

Treatment. From what has been said in relation to the pathology of this disease, it would appear that torpor of the liver and skin, in connexion with cerebral irritation, constitute the immediate cause of the excessive irritability of the stomach and bowels. Our principal object therefore must be to restore these functions; to obviate irritation and sanguineous congestion in the brain, and to determine the blood from the engorged vessels of the liver and mucous membrane of the alimentary canal. To fulfil these purposes it would be requisite to take blood from the arm to remove the congestive state of the ~~arm~~ organs, or take blood locally by means of cups or leeches, and give Calomel in small doses, though it is not necessary to adopt this mode of treatment only in the most violent forms of this disease, in milder cases it will not be always necessary to take blood, but when there is much febrile excitement blood can be taken with impunity, and with great relief to the patient, and Calomel should be given in small doses, unless we want to produce an evacuation

then we should give a large dose say five or six grains, and afterwards continue the calomel in minute doses. In all the higher degrees of fever where the pulse is tense, however small or or frequent, bleeding from the arm is necessary, and if the brain be deeply impressed, it is recommended to take blood from the temporal artery, however general bleeding is only necessary where there is a high degree of febrile excitement; after this is in a great measure subdued, local bleeding may be necessary, such as the aplication of leeches to the temples, or of cupping which has been recommend by some writers, Leeches should also be applied to the stomach, and spinal column, according to the opinion of Professor Potter they seem to be more efficient in affections of the abdominal viscera, where they are applied near the dorsal vertebra. With the view of moderating the gastro intestinal irritation, and of stimulating the action of the liver, minute portions of calomel constitute the most valuable internal remedy for combatting this disease.

It is said by some, that calomel combined with ipecac, in the proportion of from one sixth to a quarter of a grain of the former with half a grain of the latter is a valuable remedy in this disease. however I believe calomel given in proper doses is capable of accomplishing the end we have in view if administered properly, it should be given until the evacuations become mixed with bilious matter. The appearance of bile in the stools, whether green or dark, is always to be hailed as a very favourable sign, and the sooner the liver can be brought to resume its secretory action, the greater in general will be the probability of ultermate success in our attempts to subdue the disease. Calomel is our sheet anchor in subduing this disease, and where we want it to produce purgative effects, so as to rid the alimentary canal of any accumulated or vitiated secretions, we should give it so as to operate mildly upon the bowels, and if it be necessary, assisted by a small dose of Castor Oil.

Emetics were formerly ranked among the radical means of cure in this affection, and by some they are still held in high estimation, in my opinion however, their use must be very limited. In the insipient stage of predisposing weakness, they im-pel the blood to the extreme vessels, and obviate forming congestion, but are seldom followed by a permanent abatement of the symptoms, when the disease has been established. They often induce a deceitful calm and a temporary mit-igation, which is generally followed by a return of accumulated suffering, from increased irri-tability of the stomach, emesis diarrhoea and prostration. In the highest degree of local affect-ions, they manifestly increase congestion, and ~~fuel~~ add fuel to the flame. In cerebral affections they impel the blood to the brain, and therefore increase the mischief. If the stomach has been offended by any of the ingesta, which interrupts the process of digestion, and thus oppresses the vital powers associated with it, a mild emetic

may be necessary. For this purpose ipecacuanha, or a solution of common salt, are less likely to cause the mischief arising from the more sickening and lasting impressions of stranger articles.

Cathartics are indispensibly necessary, although the most active must be avoided. After the exhibition of Calomel, in minute doses, we find the number of the alvine discharges increased, until some alteration in the secretions is affected, and a gradual abatement of the symptoms is evident. In this part of the treatment, it is sometimes necessary to preserve a soluble state of the intestines, by milder means, such as the Sub-Carbonate of magnesia, oleum ricini, or small doses of Rhubarb. The first is to be preferred where an acid is to be corrected, The oil is more certain and less irritating in that sensitive state, which succeeds to inflammation of the mucous membrane, and Rhubarb, when it does not excite irritation, in small doses seems to impart a corroberating influence, though in a majority of cases where Calomel has been judiciously used, the employment of appercients is seldom

necessary.

The Warm Bath, is said to be sometimes useful in this disease, and by others it is condemned, When it is resorted to, as I think it should be when the skin is harsh and dry, and the pulse is tense and quick. Whilst the patient is immersed in warm water up to the neck, it will be proper to apply a napkin wet with cold water to the head. I do not speak this from my own experience, I have never seen it resorted to in this disease.

Opium. I believe, as a general rule is seldom or never proper. The great tendency to congestion and irritation of the brain, in this species of Cholera, renders all medicines of this kind decidedly prejudicial, when given in the early period of this disease, or when, in its advanced stage, symptoms of cerebral oppression are manifestly present. Nevertheless where the disease assumes a chronic form, and the patient is very restless and wakeful, with a dry, harsh, and withered state of the skin, and there are no particular marks of cerebral

Congestion, small doses of dovers powder, in union with minute portions of calomel, will sometimes produce very excellent effects. When from the vio-lence and rapidity of the disease, or its long continu-ance, the exhaustion becomes very great, the extremities cold, and the pulse very small and feeble, inter-nal as well as external stimulents become necess-ary. Under such circumstances, stimulating fricti-ons, together with the use of wine-whey, milk-pun-ch, or a weak solution of the Carbonate of Ammonia, are indispensible necessary to support the sinking energies of the system.

External Applications, are sometimes employed and are thought by some writers to be useful aux-iliaries in the latter stage of this disease, and by others their utility is but little thought of. Blister-ing the region of the stomach has been recomm-ended, and I have no doubt with considerable advantage, in the last stage of this disease. Before the blister is applied, the part should be slightly bathed with spirits of turpentine, in order to procure

vesication as soon as possible. Sinapisms have been used, Subefacient embrocations and cataplasms, made of stimulating herbs and spices have also been used, but I do not believe with any considerable advantage. Sprinkling the skin with cold water is highly recommended as a useful remedy, it seems to diminish the pulse, and equalize the temperature of the whole external surface. The temperature of the water should not be very low, but may be lessened at each successive application, it may be employed at sixty degrees, and diminished according to the effect it produces.

Proper attention must be paid to the regulation of the diet; throughout the whole course of the disease, nothing but the blandest, liquid articles of food must be allowed. Boiled milk, liquid preparations of arrow-root, tapioca, sago, and rice, thin oat-meal gruel, barley decoction, or a solution of gum-arabic, are the best articles for food and drink in every stage of Cholera.

Nothing contributes more to the removal of this disease, than the enjoyment of the pure air of the Country. Whenever it is practicable the patient

ought to be removed into the country, for this change is often sufficient to remove the disease in a short time without the use of any other remedial application. If this cannot be done, the patient should be carried about in the open air, and still more, by frequent rides into the country in an open carriage. These are all or nearly all the remedies which are usually resorted to in the cure of this dangerous disease.

Thus I have endeavoured to treat of this disease in a short and cursary manner, hoping that it may meet the approbation of all whom it may be handed to. But especially the medical faculty of the University of Maryland.

An Inaugural Dissertation
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to
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of
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Philip Parton Duvall
of
Prince George's County
Md

Feb. 15th 1837

To Dr. Nathaniel Potter, Professor of the Theory and Practice of Medicine in the University of Maryland, is this Thesis most respectfully dedicated, as an acknowledgement of the high regard, which is held for his talents as a teacher, and the great value of his precepts, by his

Friend
and Pupil
The Author

Preface

In offering this dissertation to the Faculty, it is hoped they will expect to see nothing great or original; as it was only the wish to obey the injunction of the Institution, that prompted me to write it, and not that I felt any ability to do justice to the subject selected. But I beg, the desire I had to degrade the subject as little as possible, will answer somewhat as an apology for its imperfections

Remitting Fever

To treat of remitting fever according to pathology, would include the three varieties now known in nosology under the names of, intermitting, remitting and yellow fevers, for they are all only modifications of the same disease; and are produced by the same causes. What was formerly treated of

in books, and even at the present day, under the head of intermitting fever, I believe with Dr Potter to be pathalogically incorrect, and that therefore the existence of intermitting fever, is not established in truth; but as he very judiciously remarks, instead of the occurrence of a complete apyrexia it is only a deceitful temporary quiescence For if we examine a patient strictly, in what is called the interval in intermitting fever, we will find sufficient evidence to confirm us in the belief that some degree of fever is still present. But true it is, one might suppose from a cursory view of the disease - the condition of the skin - and the general external manifestations of the patient, that the term intermittent would most correctly express the pathalogy of the disease

However I do not feel myself competent to discuss this point in a manner which the merits of the subject demands, therefore I will leave it for those whose talents and practical experience, will enable them to do more justice to the subject, and confine myself to that variety which is treated of in books under the head of Remittent fever - and more particularly the bilious variety of this disease

This fever is attended with manifest remissions, followed in a short time by exacerbations, and in this respect bears a considerable resemblance to the ordinary intermittent fever, of which it is only an aggravated form. They are produced by the same causes, and have no radical or essential difference from each other

The only difference that exists between them, is, that in the remittent variety the grade of violence is greater, and the paroxysms of longer duration. In fact there is such a little difference to be observed, that some have treated of both diseases under the same head. Intermitting fever is always ushered in by a chill, and so is remitting, very often; and it is a less dangerous form when it comes on in this way, and is followed by strong reaction, than when the chill is followed by little or no reaction. This is manifest as regards the treatment at first view, for if the reaction should be strong you have the disease more under your control, than where it is slight — because you are enabled to employ more energetic means to subdue the violence of action, and conse-

quently the disease; whereas in that form which is not followed by sting secretion, the system is more deeply affected by the cause, and requires more caution and discrimination in its treatment. It shows that there is more congestion, which when great greatly diminishes the excitability, and consequently forbids that active treatment which is admissible in the more inflammatory form of the disease.

The preceding is a brief account of the character of the disease, and now it becomes necessary to speak of the symptoms

Symptoms. The symptoms which occur in the forming stage of remittent fever, do not differ in any essential particular from those which ushers in intermittent fever. The first and most prominent symptoms that

give evidence of its approach, are, languor, drowsiness, anxiety, obtuse aching pains in the back, pain in the head and inferior extremities, and general indisposition. However, slight chills are often among the first symptoms, which are noticed. In the first instance these are followed successively, for several times, by flushes of heat, until the latter gradually increasing in its continuation, completely predominates and fever is fully established. When the fever is completely formed, many of the above symptoms become very much aggravated, and more especially the pain in the back and legs. Sometimes these are so severe in the legs and back that they are very like in violence to those occurring in acute rheumatism. The eyes become of a yellowish tinge, the tongue is covered with a brown

or dark coloured fur, according to the grade of the disease, nausea, and sometimes vomiting of bile occurs, a sense of weight and fullness is felt in the right hypochondrium, and epigastric region - denoting considerable hepatic and gastric disturbance; the breathing is hurried and difficult, the urine is small in quantity and high coloured - sometimes containing bile, the pulse is full and frequent, and sometimes, though not often, it is hard and tense, with a hot and dry skin.
After these symptoms have continued for sometime they gradually abate, and thus occurs what is called a remission or an abatement of symptoms. But all the preceding symptoms are liable to modification, more mild or more violent according to the power of the cause. Sometimes

the remissions are very manifest, at others there is scarcely any diminution of febrile action to be observed. There is no precise time at which these remissions may take place; they may occur at any period within twenty four hours - depending in this respect in a great measure, on the particular type the fever assumes. We always have more or less local affection accompanying this disease. The organs most commonly concerned, are, the liver and stomach, and sometimes the brain, and not unfrequently in the warmer climates. It may not be out of place here to mention, that in reviewing my notes on Dr. Potter's lecture, I find he mentions a variety that comes on with diarrhea, having the appearance and character very much resembling the latter disease - showing

manifestly that the intestinal canal is foremost in the local affection. But he speaks of another variety more formidable than this, viz. where it is complicated with chronic diarrhea. But this is never to be found attending remittent fever in its early stage, and appears to be altogether the consequence of an improper treatment in the more acute form of the disease, i.e., not bleeding to the proper extent for fear of producing fatal debility. I may remark, in this as in numerous other diseases, the bug-bear debility, has caused thousands to pay the forfeit of their lives. But the stomach and liver are very apt to be affected in this fever, either of which may become predominant in the local affection, hence the division into gastric and hepatic varieties; and it

is essentially necessary to the correct treatment of this disease to keep these strictly in view

Remittent fevers assume different types accordingly as the cause is modified in its action: but may not the particular type the disease assumes depend in a considerable degree, on the habit peculiarities &c; and on the condition of the system of the individuale, at the time he is operated upon by the cause. I shall not undertake to treat of the particular types of this disease, though they are far less numerous than those of the intermitting variety of fever — nevertheless I believe these, few as they may be, can only be understood correctly, by clinical observation: This I have not had, therefore it would be presumption in me to attempt a description of them It will be sufficient to say that it as-

sumes the quotidian, and tertian types, with some of their modifications; but it rarely or never reaches the quartan type.

The above remarks only apply to the milder remittents of the temperate latitudes. Those of the intertropical climates are generally more serious in their character - are more sudden in their attacks, and run their course in a shorter time. Indeed there is no disease that appears to be subject to so many variations in its grade of violence; and in its diversity of character as remittent fever. Though, generally they are mild in and regular at their commencement, are liable to put on a very aggravated form, if suffered to continue beyond a week unarrested. But sometimes they continue to the end of the second week, before becoming dangerous.

When this does occur, the tongue becomes more loaded with a brown colored fur, and dry along the middle; delirium attends in a more violent form; the skin assumes a yellowish cast, and is very hot and dry; debility is produced to an extreme degree; the bowels are distended with flatus, and are exceedingly tender on pressure; and in many cases there is offensive watery discharges from the bowels; with retention of urine, which cannot fail to be very distressing to the patient, and as the disease advances, there is watchfulness, anxiety, and continuel delirium

In the paludal districts of tropical climates, remittents in many cases are liable to assume a highly malignant form from their very commencement, And here it is that re-

mittents make their attacks so suddenly, and with the greatest violence and danger to the individual. They are ushered in by a chill, which is very short and violent, when powerful reaction ensues, and is sometimes so great that the patient cannot withstand it, and he dies in the first paroxysm — dying evidently from disorganization. But more frequently however, they live to the third or fourth paroxysm. During the existence of these fevers, the patient is harassed with tormenting thirst, violent pains in the head, loins, and lower extremities; anxiety and difficulty of breathing; nausea, and a feeling of weight and tension in the stomach. These symptoms, ordinarily, continue about, or near twenty four hours, when the fever abates, and there is.

a distinct remission, and some say almost a perfect intermission. This apparent absence of fever, unfortunately however, is of but short duration. A second paroxysm occurs, which is not preceded by a chill like the first, the fever commences, and soon becomes more violent and alarming than that in the first paroxysm. Now all the above symptoms become aggravated to the most alarming extent; and in addition to these the patient has red and watery eyes, with violent retching and vomiting. After a short time the fever again abates, and different in its termination from the two preceding, it leaves the surface of the body bedewed in a clammy sweat. In this way the paroxysms continue to remit, until a salutary crisis

ensues, or the patient dies, which not unfrequently he does in the third fortnight. If the patient survives the fifth or sixth fortnight, great prostration and debility result. The remissions become much less distinct, and often not to be discovered at all. Delirium always attends; and the skin either assumes that peculiar stinging sting of heat, called Calor mordax, or is cool and cadaverous to the touch. The pulse is said to differ very little from that in health, but in some instances it is quick, irregular and frequent. In this protracted and aggravated state of the disease, other symptoms usually occur in addition to those above enumerated - formidably expressing the great danger and malignity of the malady. The lips become swol-

lem, and of a purple hue; the tongue is brown or black; the urine is of a dark brown colour - offensive, and sometimes there is none at all; the alvine evacuations are fluid, and of a reddish or dark colour, or bloody; attended with a tympanitic state of the abdomen; and in the very extreme or last stage of the disease, petechia and hemmorrhages occur. In a word, if the disease makes its approach gradually, with considerable premonitory symptoms, it will, generally speaking, be milder in its form - and run its course more slowly - On the contrary, if it should make its attack suddenly without any premonitions, it will be more violent, and run its course in a shorter time.

The local affections attending this disease have already been alluded to and

specifica. The symptoms characterising each, have likewise been mentioned when speaking of the symptoms of the disease generally. Then it will only be necessary here, to remark, that that denominated gastric variety is attended with irritation and inflammation, of the stomach, with a lesser degree of inflammation in the mucous membrane of the intestines. The hepatic variety, is that in which it is attended with torpor and congestion of the liver - the function of the liver being nearly or quite suspended. When this fever is allowed to run on, these organs become seriously affected, and the result is not unfrequently disorganization and death. Therefore, as before mentioned it will be all important, in treating this disease to strictly bear in mind

these two pathological conditions
However, I do not wish to be unde-
stood here as approving the practice
and doctrine of the French Patholo-
gist, and his deciples, who refer all
fevers to the stomach as their origi-
nal seat, and that they are the re-
sult of primary inflammation in
this organ. The theory is incorrect,
but it is the practice that I more
particularly object to in this place
Instead of employing simple and
trifling means in its treatment, such as gum
water, cupping, and leaching, for fear
of adding to the irritation and inflam-
mation in the stomach, I should
employ more energetic agents, and en-
deavour to subdue the gastric af-
fection, which they are so fearful
of aggravating. Its true however, if
the individual should die under this

more active mode of treatment, the post mortem will be less conspicuous, than when they die under the Broussais practice. Here you find red and brilliant post mortem appearances, evidently the result of their own mal treatment - upon which ~~the~~ their doctrine of pathology is founded. I say doctrine of pathology, for it is remarkable for nothing else, only its pathology, as the practice it leads to is ridiculous. Notwithstanding they say, when the disease is treated in this simple manner none or very few die. But this however, we must not regard as gospel. But to return to the subject - There are a great many symptoms mentioned in books as as characterising these two local affections, which I deem too tedious, and unnecessary to enumerate, for I con-

sider them more calculated to confuse than instruct, as enough has been given when speaking of the symptoms characterizing the disease generally, to distinguish the presence of these local affections; and for all practical purposes. Then it will be sufficient merely to mention some of the more prominent diagnostic symptoms, by which these varieties may be known from each other.

In the gastric variety there is a great accumulation of bilia secretions or bile in the intestinal canal - giving evidence that the liver is not inactive; bitter taste in the mouth; the tongue is coated with a thick lair of yellowish coloured mucus; loss of appetite, and sometimes a complete disgust for every kind of food; great distress and anxiety about the praecordia; if vom-

ting takes place a considerable quantity of bile is thrown up; and the abdomen is exceedingly tender to the touch. After the disease has gone on some time unchecked, the edges and tip of the tongue become of a fiery red colour, with a black or brownish coloured list along its middle; fluid and reddish coloured stools; retention of urine, with great difficulty in swallowing liquids

The hepatic variety is characterised by intense febrile heat, in which respect it differs from the gastric; tongue is clean; violent pain in the head with early delirium; the stomach is exceedingly irritable, with violent retching and vomiting of a glairy fluid, but no bile is ejected, torpor of the bowels, with constipation in some cases. The liver

in this form, is in a state of non-secretion, with great sanguineous engorgement, which is manifested by the extreme irritability of the stomach. We have an exemplification of this pathological fact in cholera - and more especially in cholera infantum, in the recent stage of which disease there is no bile evacuated from the stomach. Towards the termination of this variety, there generally takes place copious evacuations of a black colored bile from the bowels - which may be hailed as favorable, as very few recover where this does not occur. The stomach and bowels are always more or less sympathetically affected in the hepatic variety. But the liver is the seat and throne of this fever, and is one of the most constant of all the local affections

that accompany remittent fevers
The liability of the cause to implicate
cerebral affections, was adverted to
in the commencement, therefore it will
not be necessary to dwell particularly
on it in this place: Suffiseth to say, that
it is accompanied with furious mania,
and all the manifestations denot-
ing high inflammation of that or-
gan

Causes. From what has been said
in the preceding pages, it will only be
necessary here, to make a few remarks
on the causes that produce this dis-
ease. Authors have enumerated many
as producing this fever, but I am
led to the conclusion that there
is but one cause that produces gen-
uine bilious remitting fever, viz: ma-
laria. Heat and vicissitudes of tempera-
ture, are said to produce it, but I am

rather inclined to regard these as negative causes, than having any direct agency, in producing the disease. They may act in one of two ways, either by favouring the development of malaria; or by predisposing the system, and rendering it more susceptible of the influence, of this noxious agent: or they may operate in both these ways at the same time. It is true that the disease is much more violent in very warm climates, than temperate ones. But may not the heat act here by augmenting the irritability of the system, at the same time, as before mentioned, aiding the abundant production of malaria, and in this way acting as an indirect agent. This is proved by the fact that we never or rarely have genuine bilious remitting fever in the spring,

before malaria is formed. If we do find affections of the liver occuring at this season, they are generally of the character of hepatitis. If remittent fevers however should be found to occur at this season of the year, they may be accounted for by recurring to the fact, that a person may be infected by malaria, late in autum, when the cold weather is about commencing, and malaria is beginning to decline, and pass through the whole winter without the disease being developed until the following spring. This is not unfrequently observed to be the case with respect to the ordinary intermittent fevers of this country. We have simple remittent fever, produced by a variety of minor causes which does not particularly affect

the liver. In fact, any irritation existing in the stomach and intestines may give rise to this more simple form of fever, under certain conditions of the system — as worms, to which the fever called infantile remittent, owes its production. And it may not be improper here to remark, that the bilious variety of this disease, is peculiar to warm climates, and is never to be found occurring in very cold ones — On the contrary simple remittent fever may occur any where. Remittent fever sometimes becomes epidemic, and it is always found to be that variety which is produced by malaria. However to treat of this more particularly would come under the head of epidemics.

Pathology. From what has been said when speaking of the differ-

ent varieties of this disease, the pathology will be sufficiently understood, without recapitulating in this place. It will be sufficient to say, that the pathology of Remittent fever is like that of other fevers, only there is more organs affected in this than in almost any other. Indeed there is no fever that appears to strengthen the theory of Brousais more than remittent fever

Prognosis. Nothing certain with respect to the prognosis of this disease can be given. It depends in a great measure on circumstances — the way in which the disease makes its attack, and the power of the cause which produces it. Thus if the disease comes on slowly, with considerable premonitory symptoms, we may reasonably expect a favourable term-

ination, provided it be taken early in its commencement, and a proper course of treatment pursued. On the contrary when the disease makes its attack suddenly, and the power of the cause is great, with fresh congestion, we have reason to apprehend great danger. Even under the most judicious management this form must be regarded as very fatal. In some cases it comes on with a chill without reaction ensuing. In this case death is the inevitable consequence. Sometimes remittent fever terminates in a more simple form, viz. intermittent fever. When this occurs it may be regarded as favorable.

Treatment. It must be evident, from the description of remitting fever, from the grades of violence

it is liable to assume, and the particular modifications to which it is subject, that the mode of treatment in many instances must differ essentially; and in some cases, be exceedingly troublesome to manage. Dr. Potter remarks, that there is no disease that tests the physician's skill and judgement, more than some forms of remitting fever, And indeed, sometimes it will yield to no treatment - bidding defiance to the most able and experienced practitioners. The physician is often compelled to stand by, with his hands tied as it were, and see his patient expire, without being able to afford him the least relief - On the one hand he is deterred from using the lancet and other active means, to subdue the disease in consequence of the great

prostration he is fearful will result. On the other, he is prevented from employing stimulants and tonics, knowing the tendency they have to increase inflammation and fever. This must be a scene, exceedingly distressing both to patient and physician, and the patients life frequently pays the forfeit. To remedy in some measure this awful state of things it is very widely recommended to give "large doses of calomel so as to produce salivation." This should be done at all risks — for if you succeed in effecting a salivation, the patient will recover; if not, he will certainly die* After what has been said above, the treatment I shall mention will only have a very general application. To enter into a detail of the items of treatment, would be inconsistent with the

*hey leave to correct this latter remark. The congestions may be removed without effecting salivation, for which purpose the calomel is given wholly.

object, of an inaugural dissertation.
If called to a patient labouring under this disease, who had been seized with a chill, followed by strong reaction, with violent pains in the head and back, and great irritability of the stomach blood should be taken from the arm in a considerable quantity, for a distinguished individual has observed that you cannot injure your patient by bleeding in an inflammatory disease. Some recommend, after proper bloodletting has been employed, opium in combination with calomel, to allay the extreme irritability of the stomach. To this practice I strenuously object, as being altogether a mistaken notion.* Venesection must be practised to effect this purpose; and it alone can be depended on for the complete remo-

* With respect to the opium I mean.

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cul of the congestion — upon which the irritability of the stomach depends. The distinguished professor of practice in this institution, lays great stress on the importance of removing the congestion in the first instance, in this disease, by the proper abstraction of blood, if the system will bear it.

To ensure a complete and certain cure of the affection, it is evident the congestion should be first removed, and he who expects a perfect cure of the disease by attempting to remove congestion by other means than bloodletting will find himself completely disappointed.

After bloodletting has been employed to the necessary extent, the use of fumigations become important, to remove the irritated secretions ap-

from the liver, accumulated in the bowels. But violent purgatives should not by any means be used. The mildest kind should be selected, so that they are sufficiently active to accomplish the purpose. For this purpose moderate doses of calomel or castor oil with anisseed, or some other mild cathartic. Emetics have been recommended by some in remittent fever to evacuate the bile from the stomach, but I am inclined to regard them as of very little benefit, and where there is much gastric irritation they must be injurious. They may, however, be of advantage when given in the commencement of the milder forms of this disease, where there is not much gastric irritation. And it is said by some when given in this way,

they sometimes effect a complete solution of the disease, at its very onset. If it should be found proper to employ emetics they should be selected from the mildest class.

Diaphoretics are sometimes employed, and in fact those that produce a gentle diaphoresis should always be used in remittent fever. They take off the dryness of the skin, and obliterate a considerable quantity of morbid heat - which is so distressing to the patient, in some varieties of this disease. However those medicines that produce copious sweating, are found not to be beneficial, and should not, on this account, be employed.

The chief objects to be attended to, in the treatment of this or the more inflammatory form, of Remittent

fever, is to observe the particular organs ~~affected~~, and to restore their functions respectively. These as before mention will be found to be the skin, liver and alimentary canal. The means for restoring these organs have already been noticed, with the exception of small doses of mercury to act as an alterative, for the purpose of changing the state of the hepatic system.
The above mode of treatment will answer for all the more inflammatory and less congestive varieties of this disease, under particular modifications. I say under particular modifications, for there is no disease, the treatment of which depends more upon the practitioners own judgement than the present one. so that there can be nothing more

as before remarked, than a pretty general mode of treatment, given on paper

"Though it may be out of place, I cannot forbear here, making a few remarks, on the great propensity of some physicians, to give bark, in this fever, as soon as they can discover any evidences of a remission. This is a miserable practice, and I am inclined to believe is the great cause of all the relapses that take place after this disease. The bark does not remove the congestion - the patient is only patched up by the powerful use of this article, and therefore upon the slightest exposure is liable to a relattack. This is not the case if the congestion be properly removed in the first instance

- we have no relapses after such a mode of treatment. Bark nor any other tonic should not be given in this disease, until the congestion is completely broken up, and the inflammatory action entirely subsided, then they may be used with the greatest propriety and advantage.

All the above varieties of remitting fever are liable to assume a much more malignant form, and of course will call for a different mode of treatment, from the inflammatory form. Here the congestion becomes deeper than at first, or in the more inflammatory form - and where the lancet in some extreme cases is contraindicated, and we are compelled to use calomel in large doses as a substitute, to remove the

the violent congestion. This should be done at all hazards, for if you can succeed in breaking up the congestion you may entertain a reasonable hope for the safety of your patient; if not he must certainly be lost. Some physicians are very much alarmed at the great debility, and for giving stimulants and tonics, to support the system. This is all a farce. The congestion should be removed, and then tonics will be of service, and not before.

Convalescence. Regimen and diet should be strictly attended to during this stage. The weakness of the digestive organs should be respected. In the first instance he should take nothing but the most simple and nutritious articles of diet. These should be given in small quan-

quantities and often repeated. As the cure advances the patient should be allowed more nutritious articles of diet at the same time easy of digestion. The bowels should not be suffered to become costive. He should avoid exposure to the night air, and vicissitudes of temperature. All undue excitement should be avoided, powerful mental emotions &c. He should retire early to bed, and rise early

Baltimore

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The
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of
Hippocrates.
Translated by
The Royal Institute
of the Medical Faculty
of
The Academy of Athens
from the Greek
of
Doctor of Medicine
By
Jean Hilary
Officer of
Medical Faculty of Athens
1833

An
Inaugural Dissertation,
On
Haematemesis.

Presented to,
The Provost, Trustees,
And Medical Faculty,
Of
The University of Maryland,

For the Degree,
Of
Doctor of Medicine,

By
Jno T Gray
Of
Calvert County, Maryland.

1857

Haematemesis.

This term is derived from αἷμα and ἔμεω literally signifying vomiting of blood, and is properly employed to import Haemorrhage from the stomach.

The symptoms of Haematemesis are very obvious; sometimes it is preceded for a length of time by those symptoms which denote the presence of more, or less irritation or disturbance in the mucous membrane. Occasionally a suppression of the menses or the disappearance of hemorrhoids form the commencement of this disturbance. — In other cases, the patient is without any manifest cause attacked with a sense of weight or fulness about the precordia, Cardialgia, pain in the abdomen and loins. — The appetite is capricious, sickness of the stomach frequently exists. and the patient

occasionally discharges a considerable quantity of acid phlegm by vomiting.

He also experiences foul breath; pain and tenderness in the hypochondriac region, nausea, anxiety; ringing in the ears; disposition to syncope; small and contracted pulse. Alternate flushes of heat, and chills, pale and contracted countenance. Hiccough flatulency, palpitation of the heart, and a constipated state of the bowels are also frequent symptoms. This latter condition is considered by Hamilton as the cause of this disease.

These symptoms are generally of a temporary duration, and are always aggravated when they exist after a full meal. The irritation becomes greatly aggravated, and violent inflammation ensues, and perhaps an alarming discharge of blood is the consequence.

The symptoms, which have been detailed, may occur frequently without the discharge

of blood; but it sometimes happens on the other hand, that the hemorrhage comes on suddenly, and without any premonitory sign. The patient feels a pain and fulness about the Epigastrium, prostration of strength; becomes affected with cold extremities, and vomiting by which a large quantity of blood is brought up.

The blood thrown up is generaly of a dark colour, resembling tar, sometimes in coagulated clots.

Instances are mentioned, in which small masses of lymph deprived of its cruor; resembling pseudo-membranous structure were thrown up.

In malignant fevers, particularly in yellow fever the discharge resembles coffee-grounds suspended in a glairy fluid; this would appear to be frequently the case when the hemorrhage arises from inflammation and abrasion of the mucous membrane of the stomach

It sometimes happens that partial syncope succeeds the vomiting, and the patient complains of pain in the region of the spleen, and in the lower part of the abdomen. -
The quantity of blood ejected at once is frequently very great. Instances of fatal hemorrhage of the stomach have also occurred; in which little or no blood was discharged; and sometimes the blood passes off by the bowels, with little or no discharge by vomiting.
After the blood which had gradually accumulated in the stomach is ejected, the patient generally feels greatly relieved, although much exhausted. -
Very frequently, the same symptoms return, after a longer or shorter interval, and terminate in another spell of vomiting of blood; and it may recur several times before it finally ceases. The darker the

blood when thrown up; and the more it is Coagulated, the slower we may suppose must have been the hemorrhage, or the longer it must have lain in the stomach. — A portion of the effused blood always gains entrance into the bowels, and hence a dark, grumous, alvine discharges occur for several days after an attack of Haematemesis. —

The Causes of this formidable disease have been by Authors divided into Predisposing and Exciting. — It has been mentioned by most of the writers, that Haematemesis is dependant upon a suppression of the menses, or hemorrhoidal discharge, and should be considered as the result of a salutary effort of the system, to relieve itself of the burden by which it is oppressed. —

That these causes may be sufficient to produce such an effect is certain; but that

it is dependant upon other causes is certainly true. We must not always from this, set it down as a salutary phenomenon, but on the contrary, as constituting in some, a condition alarming in its drift.—
Women are much more subject to this disease, than men and are chiefly liable to it during the menstruating period of their lives. Those of a delicate frame, and of a quick nervous sensibility, or those who are subject to strong emotions, are most obnoxious to this form of disease; but the plethoric; ruddy and sanguine are also liable to it as a consequence of defective menstruation.—
With some females it occurs during pregnancy; men are seldom attacked with Haematemesis, until they have arrived at the age of thirty or thirty five, and very rarely after the age of sixty.—
It is in them almost invariably brought on by habits of life; not favourable to

health especially to close and assiduous application to business, combined with indulgence, and the gratifications of the table; together with a disregard of bodily exercise. Haematemesis may proceed from organic diseases of the heart, or lungs. From diseases of the liver, spleen, pancreas, kidneys, and other viscera; there have been instances in which the obstruction of the liver resisting the free motion of the blood in the vena portarum impeded the return of the venous blood from the vessels of the stomach, and thereby caused vomiting of blood, but this is rare.

There are a variety of exciting causes mentioned by Authors; such as a rupture of an aneurism of the aorta, or some of its branches into the stomach; the bite of a leech when accidentally swallowed; wounds or irritation of the stomach from swallowing a bone, needles broken pieces of glasses &c.

The transmission of Electric shock through the region of the stomach will sometimes produce haematemesis.—
The application of Cold to the surface, will produce it, by determining the blood too powerfully to the delicate Capillaries of the mucous membrane of the stomach, as may the administration of purgatives, and other irritating substances, poisons. &c.—
There has been mentioned a case in which the pylorus of the stomach had been found thickened and indurated, an ulcer about the size of a bean was found in the duodenum, on the surface of which the gaping mouth of a large artery was discovered, from which the hemorrhage had taken place.—
A Constipated state of the bowels may produce Haematemesis, by which the passage of the blood through the vessels is impeded,

in consequence of the pressure of the hardened fæces upon the trunks.—
To the causes which have been enumerated, I might add the influence of external violence, as wounds, blows upon the stomach, and violent straining to vomit.—

Diagnosis.— Hæmatemesis may generally be distinguished, with facility from Hæmoptysis. In the one, the blood is generally dark, grumous, and mixed with the contents of the stomach. In the other it is not frothy and is brought up with cough, and there is irritation about the lungs.—
In Hæmatemesis the vomiting of blood is generally preceded by great uneasiness about the Epigastrium, sickness of the stomach &c. In Hæmoptysis these symptoms are for the most part absent, and the principle distress is about the chest.—

It must be confessed however, that the vomiting of blood is sometimes attended with Cough in Consequence of the blood falling into the glottis, but in these Cases, the Colour of the fluid, especially when taken in Conjunction with the inferences to be drawn from the uneasiness in the Epigastric region, will generally distinguish the two affections.—

Prognosis. Haematemesis is a formidable disease, and alarming in its appearance from the quantity of blood which is sometimes discharged, and the importance of the organ Concerned. Haematemesis which is vicarious to menstruation is Commonly a manageble Complaint. I cannot go so far as some of the Authors, who Consider it as absolutely salutary.—

Haematemesis is most dangerous when it arises from visceral obstruction; particularly

in persons who are addicted to the intemperate use of spirituous liquors. Haematemesis is more apt to become habitual than any other hemorrhage; there have been cases mentioned in which it recurred regularly every month, instead of the menstrual evacuation, without any evil to the patient.-

When the hemorrhage is not imputable to suppressed evacuations, but has a tendency to assume a chronic form, and when it is attended with fever, and there are indications of organic lesions, it is a disease of considerable danger, and very difficult to cure.-

Pathology. Haematemesis, when not connected with organic lesions, very rarely proves fatal; anatomical examinations have therefore thrown but little light on the condition of the stomach, and its mucous

membrane in this disease. Morbid appearances can be seldom detected in patients, who have died suddenly, after a profuse vomiting, sometimes ravages of the mucous membrane can be discovered, but this may be the effect of the effusion of blood.

While in other cases it may betoken a congestive, or even an inflammatory state of the mucous membrane which causes the Haematemesis.

There have been dissections recorded, in which the stomach and other viscera, were found remarkably pale after profuse vomiting of blood. Some authors have mentioned the dilatation of the arterial and venous branches supplying the stomach, as a common appearance after death from Haematemesis.—

When Haematemesis is produced by organic diseases of the stomach, it has been

frequently supposes that it was the consequence of ulcerations, producing a rupture of one or more of the blood vessels. Such cases are frequently met with no doubt; but it is certain that scirrhus of the pylorus often proceeds to extensive ulcerations without the occurrence of any vomiting; but I must say that scirrhus affections of the stomach may sometimes be attended with repeated vomiting; during their progress, when on dissection, no ulceration nor lesion in the mucous membrane is observable.. Haematemesis is an instance of exhalation of blood from the mucous surface; analogous to what happens in Epistaxis; Haematuria; and many cases of pulmonary and bronchial Haemorrhages. The causes which occasion this exhalation are referred by writers to four heads, 1 mechanical obstruction to the free return of the venous blood through the system of the

vena portae. 2 irritation of the mucous membrane of the stomach. 3 sanguineous Congestion, not referable to either of the former heads. 4 Certain states of the blood itself; in which it is so changed as to have a tendency to escape from its vessels.

Mechanical Congestion is instanced in those cases of Haematemesis which depend on an enlargement or irritation of the liver, spleen, and pancreas in consequence of which the trunks or branches of the venae portae are compressed; and the return of the blood from the stomach is impeded.

Irritation of the mucous membrane is the direct cause of Haematemesis arising from corrosive poisons, and other acrid substances.

To simple congestion, we must refer all those cases of Haematemesis which are

considered as Idiopathic, including those which are vicarious or diminished menstruation &c. The blood accumulates in some part of the mucous membrane, and escapes from its vessels, which is all that can be discovered.
And lastly certain states of the blood itself, in which it is so changed as to have a tendency to escape from its vessels. This is what occurs in certain cases of poisoning by absorption, and in Typhous fevers.
In these the frequent hemorrhages from the digestive mucous membrane no longer result from a primary alteration of the mucous membrane itself, but are of the elements of a morbid state, which exists wherever the blood has access. The black vomit in yellow fever is one of the most striking instances of such a hemorrhage.

Treatment. It is evident from what

has been said, that no special plan of practice can be prescribed in this disease, dependant as it is upon such a diversity of Causes. We must always have an eye to the Cause, and regulate our practice accordingly.
Thus, when an attack of Haematemesis has followed the suppression of some habitual discharge, as the menses, hemorrhoides &c. Our first view should be to bring the discharge back, or produce a revulsion to the part, by the application of leeches to the anus and vulva, sometimes by fomentations, blisters, and such other means as tend to make an impression on the uterus and anus, and thus establish the wonted harmony of their operations.
Where the disease proceeds from visceral obstruction, by which an impediment

is offered, to the free circulation of the blood, our attention must still be directed to the removal of the cause, of the hemorrhage, by overcoming the obstruction by which it was produced.

But here, unfortunately we shall often have to deplore the insufficiency of our remedies.

When the internal structure becomes altered, as the liver, heart, lungs, and pancreas, no human skill can restore the original conformation; and the hemorrhage which is the consequence of the disease, will only admit of a temporary palliation.

All we can do, therefore, under such circumstances, will be to avoid those causes which tend to accelerate the circulation, and to have recourse to such remedies as will be most likely to make the most favourable impression upon the diseased

organization. There is one form of Haematemesis which may be effectually controlled by our remedies; I allude to that form of the disease which is the result of what we have denominated hemorrhagic irritation of the mucous membrane.

When this form of disease is preceded by the premonitory symptoms above detailed; our principle object should be to prevent the developement of the hemorrhage, which must be effected by such means as are calculated to subdue irritation.—

For this purpose, the most rigid abstinence should ~~should~~ be enforced, the patient should confine himself to mild, cooling, demulcents drinks, and have his bowels opened by means of an ejection, or when this is impracticable; by some mild laxative medicine. Stimulating Cathartics must be rigidly avoided. Where these means prove ineffectual in

an attack, or where, we have not been called untill the hemorrhage has supervened, our object must be to remove the cause, and arrest the flow of blood as quick as possible.
Here our reliance must be placed upon mild measures till circumstances may occur, in which it may be necessary to detract blood, such cases however are exceedingly rare, and when this indication exists, it may be better fulfilled by leeches or cups applied to the region of the abdomen, or to the verge of the anus. Cases may occur however, in which it may be necessary to resort to general bleeding.—
It has been customary with practioners to have recourse to active astringents, and stimulating remedies in this disease which they suppose by coming in immediate contact with the capillary

vessels, constringe them, and thus afford an effectual barier to the further discharge of blood. It is here, that there are many cases of Haematemesis in which this practice will prove successful. But we should bear in mind that extensive inflammation and disorganization may be thus superinduced, and reflect that while we are arresting the hemorrhage, we may be preparing a more certain chance of death in a different shape, than the hemorrhage could have occasioned.

Instead, therefore, of having recourse to these stimulating remedies at first we must pursue a diametrically opposite course of treatment; we must place our patient in a cool place, enjoin the most perfect quietude; and place him upon the use of mild refreshing drinks, which should be rendered cold by

the addition of ice. It may also be of advantage, in some cases especially when the irritation has somewhat abated to add some of the milder vegetable acids to the common drink of the patient.
Pounded ice when it can be obtained, should be put on the region of the stomach; and if the extremities are cold, they should be enveloped in warm flannels or fomentations. The bowels should moreover, be freed of their contents from time to time by means of emollient Clysters; and when the vomiting proves troublesome, it may be often appeased by adding a little opium to the clyster. These means perseveringly employed, seldom fail in short time to make a marked impression upon the disease, and in a majority of cases will put a complete stop to the hemorrhage.
Various astringents have been recommended in this affection, as the acetate of lead;

It may be given alone or in combination with opium. Oleum, Kino, Catechu, and other articles of a similar kind may be likewise administered when the degree of irritation is not sufficient to interdict their use.

These are the means to be employed in what is denominated active hemorrhage of the stomach. There is one form of this disease, which is connected with an opposite state of the system, in which the powers of life are completely prostrated; the extremities cold, the pulse weak and fluttering, and the whole system weakened by a deficiency of vital force.

This corresponds to what has generally been denominated passive hemorrhage, which has been very justly objected to, but which, nevertheless designates a form of disease, requiring in its management, a different course from that which has been laid

down. It is generally connected with a low state of fever &c. under which the system is so debilitated as to forbid the employment of the depletory remedies above recommended.

The cooling drinks will however, prove equally useful here as in the other form of the disease but here we can have immediate recourse to Astringents. Those which have been recommended, may be employed; or we may with safety resort to others; The muriated tincture of Iron, in doses of ten or fifteen drops; frequently repeated, will often prove highly salutary; as will the mineral acids.

It is under these circumstances, that the Oil of turpentine will be found a valuable remedy. It has arrested the hemorrhage when other means had failed.

The irritability of the stomach, and vomiting in this form of disease, as well as in the

active form is sometimes so considerable, as to occasion all remedies to be ejected, under such circumstances, it has been recommended to apply a blister to the region of the stomach, not only with a view of controling this symptom, but also with the object, to direct the irritation to the surface of the body.

Purgatives have been recommended in this disease by Authors; but I would restrict them, to those cases in which there is a derangement of the uterine system; great torpor of the bowels, and a sluggish condition of the whole system. The operation of a Cathartic will in such cases bring away a tremendous quantity of offensive fæces, and with a discharge of these, the condition of the patient becomes meliorated; and he is gradually, and progressively, restored to health.

There have been cases mentioned, in which Emetics have been given in Haematemesis with

great success, of the propriety of this practice; I am far from being convinced.

It is however, my duty to state that several cases of vomiting of blood have been arrested by giving an Emetic of Ipecacuanha. In one case the bleeding had greatly debilitated the patient, and in another there was great pain across the region of the stomach, oppression and palpitation; in both cases, the medicine afforded immediate relief.

After we have arrested the hemorrhage, it would be proper next to endeavour to discharge the blood which has accumulated in the stomach and bowels.

For this purpose a little Castor oil, sulphate of magnesia, or some other mild laxative may be employed. In proportion as the patient recovers, he may be allowed to return to his accustomed diet, useing first the mild farinaceous articles; afterwards light soups, and finally solid food of easy digestion.

In that form of the disease which is accompanied with a broken down state of the vital forces; tonics will be necessary to support the system, and enable the patient to bear up under the disease; of these bitters, peruvian bark, quinine &c. are the best, and should be administered according to the circumstances of the case.

Having once commanded the disease, we must next sedulously guard against a recurrence. To secure an exemption from which the patient must avoid all causes which would be likely to bring it on, and live a temperate and tranquil life, free from the cares and turmoils of the passions, and screened from those tumults which too often ruffle the sweet serenity of life. —

An
Inaugural Dissertation
on

Dysentery,

Addressed to the Provost Trustees and
Faculty
of the,
Medical department of the
University of Maryland
For the degree of,
Doctor of Medicine

By

Benjamin L. Bird of Maryland
February 15th 1837.

To

Nathaniel Potter, M.D.
Professor of Practice and Pathology, in the,
University of Maryland

The,

,Distinguished Practitioner

And,

,Able, Pathologist.

This treatise is respectfully dedicated

By

Benjamin L. Bird

Preface

In selecting this disease, as the subject of my dissertation, I do not flatter myself, that I shall be enabled to advance any thing, original, or to add any thing more, than is already known, to illustrate, in a more clear and satisfactory manner, the nature and Pathology of this interesting disease. Nor indeed can it be expected, from one whose experience has been so limited, and whose ability to do the subject justice is so incompetent. It is, therefore, only in respondence, to the injunction of the Institution that it is presented to the Faculty. Not that it possesses any thing original, or that it will add any thing to the science: Therefore as I have endeavoured, to the utmost of my ability to do justice to the subject; I hope it will be a sufficient apology, for its many imperfections

Dysentery, so denominated when the in-
flammation is chiefly located in the mu-
cous membrane of the colon & rectum,
as characterized by frequent, mucous,
and bloody stools - tormina & tenes-
-mus, frequently more or less phlogosis
occupies the whole extent of the in-
-testinal tract from the duodenum
to the rectum. But even where this is
the case, the signs of inflammation
and its effects are always more
conspicuous in the colon & rectum.
The nosological definition of this
disease is, however very imperfect,
in as much as it does not indicate to us
the quantity of action. Nor in any way ena-
-ble us, to form a correct notion of its
true pathology and nature. By the
name we understand nothing more
than a bad discharge from the bowels
without any reference to the cause that

produced it. Sometimes the discharges consist almost wholly of mucus without any blood, exhibiting that variety of the disease, known by the name of morbus mucosus or dysenteria alba. At other times the discharges consist entirely of blood, then the disease is called the bloody flux. For the most part however the mucus discharge is mixt with blood. This disease is much more prevalent in warm climates than in cold. Though they are by no means confined to warm climates alone. For we often find dysentery of a very inflammatory form in winter. In a word dysentery may prevail at all seasons. Those of the tropical climates are much more violent and consequently run their course much sooner, than those dysenteries which occur among us. Dr. Cullen and many others of the present day, are of the opinion, that this disease is contagious. But I am inclined to think with many of the most able pathologists, that this disease is never contagious. Doct.

Potter observes, that he has frequently inoculated persons, with the dysenteric discharges, but invariably without success.
That dysentery does spread in the form of an Epidemic cannot be denied, for we not unfrequently witness the spread of this disease over whole districts. I shall treat principally of the acute form of this disease, mentioning when occasion offers, the causes, the different varieties, etc. etc. Symptoms. This disease is often ushered in, by a sense of languor; want of appetite; nausea; bad taste in the mouth; depressed pulse; slight chills, alternating with flushes of heat; thirst; dry skin, transient pains in the bowels, and occasionally diarrhœa. sometimes, however, from the more intense operation of the immediate cause on the mucous membrane, the disease comes on suddenly, with griping; mucous, and bloody stools, and tenesmus. There is a constant desire on the part of the patient to go to stool

without being able to evacuate any thing but a few hard scybala, or a little mucus mixed with blood. As the inflammation runs high, the stools become, more & more frequent; the griping more severe, and the tenesmus more considerable. The violence of the tenesmus is indeed a pretty correct criterion of the violence, and danger of the disease. The Tormina is extremely violent and distressing, particularly just before the urgent calls to stools, are experienced; and a constant soreness is felt in the abdomen. At first ~~in the~~ in the inflammatory state, the tongue is white; The pulse is tense and quick, or full and bounding. If this state of things is suffered to go on unsubdued the proper plan of treatment not having been put into practice, the result will be truly ~~a~~ alarming. In the advanced periods of violent cases, the dysenteric discharges will have a very peculiar smell, of a pungent and cadaverous odour, which is not characteristic of

the first state. The stools are of a dark brown colour with portions of slime; or they may have the appearence of dirty water, slightly tinged with blood. The stools become more and more disagreable in odour, until at length an experienced physician, will be able to recognize the smell to be dysenteric. Mac Kintosh. In protracted and unsubdued cases, besides the symptoms already enumerated there is great prostration of strength, the pulse becomes small corded and very frequent; the countenance sunken and cadaverous, the tongue becomes brown dry and black, black sordes form around the teeth, the skin is either parched or covered ~~with covered~~ with copious clammy perspirations, which in the worst cases does not mitigate the symptoms. The above symptoms characterize the most malignant form of the acute variety. An apparent amendment sometimes takes place even

after these dangerous symptoms have come on, but alas, we are soon disappointed in our hopes for although the pulse rises and becomes better and the tenesmus and tormina remit, all the most formidable symtoms, continue to travel on with increased violence to a fatal termination. In chronic cases the tongue is often smooth clean and red; the urine is always scanty and high coloured and sometimes of a pungent odour. There is always an inactive morbid condition of the hepatic and cutaneous functions in this affection. The discharges being invariably free from bile and the skin ordinarily dry.

Causes.– There have been many causes mentioned by writers, as capable of producing dysentery, but heat is most commonly to be considered as the remote cause. Heat likewise affects the liver – here it is that you find dysentery complicated with disease of this organ and becoming so much

implicated in some cases, as to obtain the appellation of Billious dysentery, of some writers, Marsh effluvia is capable of producing dysentery and it constitutes in some cases a distinct remittent variety of this disease. It is maintained by some, that cold or reduction of temperature acts as a remote cause; this however I am inclined to doubt. That reduction of temperature, has and will produce dysentery, I do not deny, but it will not produce it, unless, there is previous predisposition induced in the system, by some other remote agent. Cold then, can only act as a direct or exciting cause. There is a scorbutic variety mentioned by some writers, which appears to depend upon a scorbutic habit of body, and the causes which produce this malady; and is regarded as a very formidable variety; as was evidenced at the Milbank penitentiary in England. Among the sporadic causes of dysenentery

may be mentioned, putrid animal matter taken into the Stomach, the immoderate use of unripe fruits; indigestible and unwholesome food; and irritating articles of all kinds recieved into, or generated in the bowells of those, who are predisposed. Most writers mention Scyballa as a frequent cause of this affection; but the correctness of this opinion has, of late, has been controverted. J. Johnson And Dr Eberle is of the opinion, that those hardened balls, are but very rarely indeed found, in the dysenteric discharges. While Dr, Cullen declares that, "it is certain that hardened feces retained in ~~bowells~~ the colon are the cause of the griping, frequent Stools, and tenesmus. It is very certain, I think, that when they become impacted in the colon, their presence must give rise to a great deal of pain and uneasiness. Yet I cannot believe

with Dr Cullen, that they are the sole cause of the griping frequent stools, and tenesmus. There is a dysentery, says Professor Potter, occasioned by introducing vegetable matter into the stomach, such as flower or bread in an incipient state of putrefaction. It can be cured, as also can, that variety, produced by taking in putrid animal food, only by omitting the use of the article that occasioned it. Chronic and protracted cases of hepatitis will produce dysentery of very long continuance. Post mortem appearances. There was considerable diversity of statements and opinions concerning the true pathological condition of the system in dysentery. Richter was of opinion that dysentery is a rheumatic or catarrhal affection, of the mucous membrane of the intestinal tube. And at one time this was the popular opinion. Dr Cullen considered the proximate

cause of this disease to be" preternatural constriction of the colon, occasioning those spasmodic efforts which are felt in the severe griping, and which effort propagated downwards to the rectum occasion the frequent mucous stools and tenesmus. It does not appear from this that Dr Cullen, was aware that the mucous membrane of the large intestines, was in a state of inflammation, which is considered now to be, the most essential pathological condition in dysentery. In some cases inflammation and its consequences are found no where but in the colon & rectum, but frequently more or less phlogosis is found in the whole intestinal tube, from the duodenum to the rectum. When dysentery terminates fatally in the inflammatory stage, the mucous membrane of the colon and rectum, exhibits numerous redish coloured patches, somewhat elevated

above the surrounding parts, and in some cases these elevations are covered with a number of small vesicles, more especially, in the disease as it appeares in infants. Upon dissection often a high degree of inflammation, The mucous membrane of the colon will be found ulcerated, soft and pulpy to the touch, and sometimes gangrenous. The liver also is frequently found to have suffered structural derangement, It is very often greatly enlarged and engorged with blood. That the function of the liver is always, more or less disturbed in dysentery is a bundantly manifest and will not pretend to be denied. However in cases occouring sporadically organic derangement of this organ is scarcely ever noticed, while on the other hand in Epidemic dysentery and more particularly as it occours in hot and unhealthy districts this very frequently

occurs. Prognosis, If the discharges in the commencement consists almost wholly of blood the disease is much more tractable, than when the evacuations consist entirely of mucus, or mucus mixed with blood. Copious discharges of blood in the commencement of the disease is said to be benificial, perhaps by lessening the congestion in the portal vessels, and likewise by relieving the engorged and inflamed vessels of the mucous membrane. Colliquative and offensive stools in the advanced period are indicative of much danger. A tympanitic state of the bowels, more particularly if it is attended, with discharges of the bowels, of a muco-sanious fluid, is a highly unfavourable sign. On the contrary the appearence of bile in the evacuations, indicate a favourable result or change. If the tormina

tenesmus in the bowels abate, the tenderness of the abdomen diminishes at the same time the skin becoming uniformly moist, we may conclude that the disease will terminate favourably, and more certainly if the stools become more of a natural colour and character. Treatment, From what has been said it is evident, that there are three morbid conditions present in dysentery, which it is important for us, always to keep in view if we expect to practice successfully in the disease; 1st. Inflammation of the mucus membrane of the intestinal canal, to a greater or less degree, sometimes being confined almost exclusively to the large intestines, at other times to the whole intestinal mucus membrane; 2. disordered function of the liver; 3 torpor of the cutaneous exhalents. The steps which are to be taken to correct these three morbid conditions are

very obvious. As the high arterial excitement depends, in a great measure upon the local inflammation, this should in the first place be obviated. To accomplish this end, general bloodletting is the first means to be imployed and after this has been carried to the proper extent it will be beneficiale to bleed locally, by means of cups and leeches. This disease is very frequently attended with constipation, though the patient has a constant desire to go to stool, he evacuates nothing but a little mucus or mucus mixt with blood, and a few scybala. A mild cathartic given here will never fail to afford considerable relief. It removes the accumulated feces and acrid secretions from the bowels which can never fail to be a source of great annoyance to the patient, and always aggravates the inflammation

Besides; the use of mild cathartics lessens in some considerable degree the action of the heart, and arteries; and lessens the great determination of blood, to the inflamed mucous membrane, by removing the acrid secretions from its surface, which keeps up the irritation, inviting to an afflux of blood. But active purgatives should never be used as they can never fail to increase the irritation, and thus produce considerable injury; Purgatives are indeed the most valuable agents we possess, in the cure of this disease; they are indicated in many cases where bloodletting, would be improper; And under judicious management they may be made to act beneficially in almost every form of dysentery. Emetics, were formerly much prescribed in dysentery, and it appears in

many instances with important advantages, and it would not be unreasonable to suppose that an emetic given in the commencement of this disease, might do important service. When given in the first instance they serve to evacuate the contents of the stomach, equalize the circulation, and break up the determination of blood to the lower bowels and thereby assist in removing inflammation. They likewise produce a determination to the skin and diaphoresis. But these are not the only ways, by which advantage is derived from the employment of emetics. They excite the portal circulation, which is always more or less languid in dysentery. by the concussion which is given to the abdominal muscles in the act of vomiting. The mechanical process of

vomiting, also has a beneficial effect on the liver, obviating the congestion, and promoting the activity of its function, So important and intimate are the relations existing, between the mucous membrane of the alimentary canal and skin, or the surface of the body, that the disturbed function of the one, must always in a greater or less degree, interfere with that of the other, and hence in all affections of the intestinal canal attended either with high irritation, or inflammation, the skin is dry and harsh, and hence too the excitation of the cutaneous exhalents generally contributes greatly to the removal of such affections. Sudorifics have long held a primary rank among the remedies for the cure of dysentery. Mosely asserts that intermittent fever is not more

certainly cured by Bark, than dysentery by sudorifics, However some difference of opinion is expressed among authors, with respect to the comparative utility of copious sweating in this disease, and it is affirmed by some that medicines that will only keep up a gentle and uniform moisture of the skin, will procure all the advantages which would be obtained from copious sweating. After the bowels have been emptied of their contents, and the general arterial action abated, by bloodletting, where the pulse indicates this practice, diaphoretics may be used with the greatest satisfaction and advantage in combination with calomel. The dovers powder in conjunction with calomel is an admirable diaphoretic in this disease. This operates on the hepatic system which is a very valuable property in its favour

Opium and Ipecacuanha in combination, likewise forms an excellent diaphoretic in the treatment of this affection. A number of other diaphoretics, have been recommended in the treatment of this disease, but none will be found to answer the purpose better, than those already mentioned. Calomel is one of the most valuable agents we possess in the treatment of dysentery, either with a view to its constitutional operation, or its utility as a purgative. It likewise appears to have some influence in allaying morbid irritation. Almost every writer acknowledges Calomel to be an excellent remedy, in the treatment of dysentery, when given with a view to its alterative effect on the system. But it is never necessary to excite profuse ptyalism or seldom requisite to produce it at all. The gentlest mercurial effect is all that is required to remove the disease. Astringents are of doubtful propriety in the treat

-ment of dysentery; and will never be found necessary, if the disease is properly treated in the beginning. The above mode of treatment, will be found applicable to all cases, of dysentery as they commonly occur in this country. But there are some difference in the causes, which produce this disease, so as very considerably to change its type, and accordingly will call for some modification in its remedial management. There is a variety occurring on board of ships; and in hospitals, camps, and occasionally in old persons of a low death like debility, and tending to putrid ity. Here it would be exceedingly improper to imploy evacuants of any kind. A single cathartic will kill our patient, tonics and stimulants must be given to strengthen and prevent the patient from sinking. To draw blood in this state would produce immediate death. The patient

must be allowed a stimulating and nutritious diet, such as milk thickened and boiled, and nutmeg grated into it panada made with wine, wine whey &c There is mentioned a variety of this disease called intermitting dysentery, which is produced by marsh effluvia, and is characterized by its occuring in paroxysms The treatment is manifest. It is the same as in common dysentery, Blood letting and calomel, together with some of the other adjuvants. That variety produced by the ingestion of putrid animal, or vegetable food as before mentioned can only be cured by omitting the use of the article. There is another variety of this disease which is brought on from chronic disease of the liver and spleen, This must be cured by attending to these organs, and correcting that morbid condition, giving rise to the dysentery. The

remedies recommended for the purpose of removing chronic affections of these organs are numerous, but the most of them are entirely inert, Mercury and Iodine are now used as the only remedies which will cure them effectually. These should be used in such a manner as to bring on a complete alterative effect on the system so as to change the state of the glandular apparatus. If we should have occasion to use astringents in this disease the black berry root will be found to be as good as any other a decoction of red oak bark in milk is verey good sulph alumo potash, sulph Zinc and may others have been recommended in protracted cases of this disease. Anodyne and demulcent ~~agents~~ injections cannot be too highly praised in this disease, after proper depletion has been practiced, to relieve the painful suffer-

ings of the patient.

On Tubercular Consumption

An inaugural dissertation

presented

to

the Medical Faculty

of

the University of Maryland

on

Tubercular Consumption

by

Joshua R Nelson

of Harford County Maryland

For the degree of Doctor of

Medicine

February 15th 1837

Dedicated

to

Dr Ephraim Bell

my

worthy friend and

excellent practitioner

Joshua R Nelson

On Tubercular Consumption

As the pathology of this disease is now well known and very well described by many authors I do not hope to advance any thing new or add any thing valuable. But as it is a disease of frequent occurence and of a formidable character I have ventured a few remarks

This disease occurs in all countries and always arises from a scrofulous diathesis. The disease is easily produced and when fully developed is the most fatal and unmanageable of all the varieties of consumption. Although the disease bears this aspect it is possible that persons with this habit may pass through a long life, if proper precaution is practiced to avoid those causes that tend to

produce erythema in the lungs and the development and suppuration of tubercles in these organs.

Symtoms – It is asserted by some that hamoptysis renders the existence of tubercles in the lungs very probable. That it is, sometimes, a precursor to this disease cannot be doubted, but we more frequently find it arising from other conditions of the lungs, which is shown by the fact, that persons, who have had repeated attacks of hamoptysis during their lifetime, were not found to have tubercles in the lungs after death, and many live a natural life without their general health suffering from this symtom

Tabes Mesenteric is always present in this disease, which is manifest from the general appearance of the body which presents an anamic condition

because the system is prevented from receiving the due quantity of nutritive materials on account of the enlargement of the mesentery glands. There is cough, at first dry and afterwards the expectoration presents a buckdust colour which is characteric of this variety of consumption; pain is generally present in some portion of the chest; the respiration is short and hurried, hectic fever is a constant symptom in this disease and is probably produced by the continued irritation and the presence of pus which produces a poisonous effect upon the nerves

Authors differ as to the mode in which tubercles are converted into pus, some contend that it is produced by a process of softening and other with more propriety think that inflammation is concerned in this process.

nightsweats and diarrhea are unfa-
vorable symptoms and generally come
on in the last stage of the disease
The diarrhea arises from an ulcer-
ation of the lower portion of the
intestinal tube, which commences
in the mucous follicles in that
situation

Cause

The disease is hereditary, and is
generally developed in adult age. The
tubercles are always present in the
lungs or are readily aroused into
existence on the predisposition by
slight exciting causes. There are dif-
ferent views entertained concerning
the origin of tubercles in the lungs
and medical men of equal
eminence are divided on this sub-
ject. While one party maintains
that inflammation is intimately con-

cerned in their production, others consider that they are generated under circumstances apart from inflammation, to which opinion, I am inclined and strengthened in it, by the sudden development of the substance and the rapid progress with which some persons are carried off with this disease under the vulgar name of galloping consumption

The exciting causes arise from those circumstances that tend to excite the vascular system and produce congestion and inflamation in the lungs as cold; vicissitudes of weather, excessive venereal indulgence, the depressing passions; the admission of extraneous substances into the lungs; hence glass grinders and stone cutter are often victims to the disease; repelled cutaneous

eruptions, as tinea capitis which is probably a scrofulous disease; irritation seated in other viscera of the liver and alimentary tube, hence the name dyspeptic consumption; the cessation of some accustomed discharge, as the catamenia in the female which is more frequently the cause than the consequence of this disease, for those who have observed the progress of the disease in females, have discovered that a majority of them menstruate regularly throughout the whole course of the disease. This disease is often a sequela of an attack of measles which disease has a great tendency to develop tubercular action in the lungs and other scrofulous diseases, hence ulceration behind the ears and others of a similar character

Treatments

When this disease becomes fully established, art can do little or nothing hence the disease may be said to be incurable, although some cases are reported as cured, we may consider them rather as an escape than a cure, for it has been found that tubercles are not absorbed or removed unless after they are converted into a pus like fluid, they find a way out of the lungs by some unnatural opening and then the cavity cicatrizes by a membraneous or cartilaginous substance which very seldom occur for one tubercle is seldom alone in the lungs

Although this disease is so formidable in its character when fully developed yet we have remedies to prevent its development and retard its progress

It is not my intention to mention all the medicines and remedies that have been proposed and highly extolled in the treatment and cure of this disease, but will notice those that bear the aspect of remedial powers and experience has proved to be beneficial

It is in the incipient stage that we are to expect benefit from our most valuable remedies. Bloodletting both local and general is highly proper, counter irritations are indispensable, Seatons or tartar emetic ointment, which is the best, should be employed, blisters are also valuable applications

Antimony is the best internal medicine we possess in the first stage of the disease - it should be given in small and repeated doses so as to keep the vascular system reduced

Digitalis is a medicine of high power.

in subduing vascular excitement and is highly recommended in this disease, but its effect is not permanent.

Emetics are said to have been used with advantage and are certainly valuable agents when properly employed, but unfortunately they are too often carried so far as to produce inflammation of the stomack and increase the existing disease

Mercury and iodine, whose action on the system is somewhat similar have been used by many practitioners and are said to produce beneficial effects, but the advantage derived from these medicines in the treatment of consumption were certainly in other varieties which depend on other causes. For instead of these medicines producing good results in tubercular consumption, they never fail to aggravate the

disease and hasten the development and the suppuration of the tubercles
Arsenic appears to possess some powers in relieving this terrible malady, Dr Potter thinks he cured a case in the Baltimore Infirmary with this medicine, he commenced with VIII drops* three times a day and gradually increased the dose to XXX drops until the unfavorable symptoms disappeared
Prussic acid is a favorable remedy with some practitioners in allaying cough and is certainly a powerful medicine but unfortunately it is too dangerous to employ in any disease
Inhalations are useful in allaying cough and tarfumes are generally used for this purpose. Demulcents are generally resorted to in arresting the cough
When the unfavorable symptoms come

* Fowlers Solution

on as nightsweats and diarrhea we can but use palliatives although sometimes these symptoms can be arrested with benefit to the patient. The mineral acids and the acetate of lead will sometimes relieve this distressing symptom*. When diarrhea appears in the last stage of the disease, we can only expect to afford temporary relief and appropriate treatment will often produce happy results. As diarrhea in this stage is the consequence of ulceration of the mucous membrane of lower portion of the bowels, topical applications to the abdomen will sometimes have the desired effect.

Besides the medicines for the cure or rather the prevention of this disease certain hygienic rules are to be observed in the disease. The patient

* Night sweats

should always wear flannel so as to keep up a natural perspiration and prevent the bad effects of the vicissitudes of weather. Gentle exercise should be practised, riding on horse back is preferable. Sea voyages is one of the best measures for reducing vascular action, but it is to be regretted that it is not persevered in a sufficient length of time.

If persons of a scrofulous habit or with tubercular consumption live in a cold and variable climate they should always remove to a warm, uniform and salubrious country for this is the best of measures for preventing the disease and arresting it progress when developed. When persons whose circumstances will admit, should remove to a warm climate they should go

before the disease becomes fully estab
lished for too often we see many die
on their way and many return
to die in a short time

An
Inaugural Dissertation
on
Cholera Infantum,
Presented for the examination
of the Provost, Trustees
and
Medical Faculty
of
The University of Maryland,
for the
degree of
Doctor of Medicine:
by
George L. Shipley,
of
Maryland
1837.

To

Nathaniel Potter M.D.

Professor of Theory & Practice of Medicine in the University of Maryland.

Respected Sir.

Allow me the privilege of availing myself of the present opportunity, to acknowledge the many obligations due you, for the much practical information that I have received from a due attention to your public Lectures and private examinations. At the same time, receive the warmest wishes of my heart, for your general health, prosperity and future happiness. And may you live long to mitigate the sufferings of humanity — And may the science of Medicine never forget to claim you as one of her brightest ornaments, — and one of her most enthusiastic advocates —

This essay is inscribed by your Friend and Pupil

Geo S. Shepley

Cholera Infantum

To reflect on the disease that I have chosen as the subject of a dissertation, I feel well convinced, that I can say but little that has not been received from the most proficient and experienced sources.
The Cause, Symptoms, Pathology & Treatment of Cholera Infantum have met with a host of observers! each and every writer has tried to explain every feature of this disease in as clear and conspicuous a manner as possible. But unfortunately, many of the theories that have been instituted have met with a stern and decided opposition. They have been made the topic of discussion among many of the most illustrious stars of our age, and it will long remain to be. We see men rising in every age and in every clime, untutored by experience, writing more from the impulse of feeling, than from a clear and concise conception of the subject that they strive to illustrate or

explain. Their pen aided by the outpour-
ings of a fertile imagination, they have
thought it like the spear of Ithuriel ele-
citing light from darkness. But many
of those theories, and those with which
their authors were most elated, were but
ephemeral and were soon hushed on the
pillow of forgetfulness.
But to commence my subject proper. Cholera Infantum may be defined to be a disease, that is peculiarly adapted to the Infantile System, generally making its attacks between the fifth and twen-
tieth Month. Although it may occur af-
ter or before this time, but generally speaking this is the period at which it is mostly observed. It is attended with considerable fatality. Nearly one fourth of the deaths of Infants in our large and populous cities, seems to be from this disease. Therefore, from this

calculation we may presume that there are few diseases more calculated to blast the only hope of a fond parent; and there are few that calls, more loudly for relief! To recur to its history we find it to be one peculiar to the United States, and particularly to the Middle and Southern. Its origin is not very remote, as it seems to have sprung up, and noticed within the last Century. In our Atlantic towns which were more flourishing, this disease first appeared. Soon afterward it was witnessed in our smaller towns and villages, and on those Farms & Plantations that were soonest cleared of their wood and under wood, which served as a protection to the soil from the beams of the Sun.
It appears from this, that only the Cottage in the wilderness surrounded by vast shrubbery and majestic Trees, seems to be exempt from this disease. and if

robed of this protection; the little Infant that before, only felt disease as a stranger, now would become its most frequent guest. — . —

The causes that are concatenated in the production of Cholera Infantum, are many and various; and if we pause, and take a view of them unconnectedly, we will find many better calculated to lead the inexperienced student astray, than to be of much avail to him.

Like many other diseases that partake of a character somewhat of a similar nature; — Cholera Infantum owes its existence to Atmospheric temperature. Be the exciting or proximate causes what they may be; if we trace it out to its origin, we will find that heat was the first and great cause, upon which it depended.

Heat acting on the extremely nervous system of Infants, seems to bring on a kind of

predisposition, or forms a channel as it were, by or through which the many causes act, capable of bringing on that morbid train of symptoms, which is so characteristic of this disease. Therefore heat is the sine qua non, and without it, no other cause can produce it. It next becomes necessary to inquire into, and examine those causes which act in conjunction with heat and aid in so natural a manner in the production of Cholera Infantum. This would, and will naturally lead us into its very birth place.

The foul and contaminated atmosphere of Crowded cities, when there is a sudden development of heat, seems to lay the foundation of this disease, in the system of every Infant within its sphere. It renders it particularly irritable, and there is at once a liability in the system to have this disease produced by the irritation

of dentition and many other causes to which the Infant is contiguous. The most crowded parts of large cities, - and those which are the worst ventilated, seems to be the principal seat of its ravages. If we view the children of those places, of a morning after a night of close confinement, - with what are we struck? - we behold pale and languid countenances, cold and shrunken appearances, the once cheerful eye dimmed and cheerless, and the whole economy of nature seeming to be a wreck of disease. The sublime language of Thomson in this place would be quite apropos. when says he

"The kindling grace
"The enticing smile, the modest seeming eye,
"Beneath whose beauteous beams belying heaven
"Lurks stretchlips cunning cruelty and death."

Marsh effluvia has been a theme for the speculative. The investigation of this, as a cause of Cholera Infantum has paved the way

for much argument and dis-puts. But from what I can learn on this subject, it has been refuted by most our best writers on this subject. and they have given, I think proffs satisfactory, to prove their arguments. And in my own estimation, I am decidedly of the opinion, that it only needs but a little observation, for any one to discover the fallacy of the idea entertained by those in favour of Marsh effluvia. How often do we see Cholera Infantum raging in all its forms throughout a neighbourhood, and not a case of intermitting or remitting fever to be found? and do we not see Cholera Infantum, appearing as early as the latter part of May and through the month of June, (should there be a sudden impulse of heat.) which is long before the decomposition of vegetable substances, from which gaseous emanations are evolved.? And besides, almost our whole country

is subject to gaseous exhalations, where only certain spots appear to be occupied by Cholera Infantum. Doctor Cartwright has observed, "that Yellow fever is unknown in Cincinnati, and all the inhabitants of that flourishing city are remarkably exempt from the common bilious fever of the country, yet the Cholera-Infantum prevails there to an alarming extent." This I think might satisfy every inquisitive mind and leave not a stain of doubt.

There is another cause, that I will mention, plucked rather from the field of imagination, than from observation. Tis that as mentioned in the treatise of Professor Potter on Cholera Infantum, published in the medical and surgical review of Baltimore. It was thought at one time, that a deficiency of Oxygen in the Atmosphere, rendered it physically

impossible for the lungs to perform their office in oxygenating the blood. The followers of this theory, became so much elated with it, that they went so far as to invent an apparatus to diffuse oxygen in the apartments of Children labouring under this disease. Unfortunately for them, the absurdity of their views, were too soon made manifest to an enlightened world, and they faded away, much like unto the vision of the Alchemist's of former ages, when they thought that they could transmute all kinds of metals into Gold. But they, like them when disappointed of their hopes plainly saw that their theory was founded more upon the "baseless fabric of a vision" than on truth and observation. Like all other vague and unmeaning theories, it, with all its host of followers, have been swept away by the golden hand of experience

and has now become "unpitied & unknown"
The principal exciting causes, we most frequently find to be, are the following.
Weaning during the hot months of Summer; Indigestible & irritating articles of food; Suppressed perspiration; Unripe fruits; & dentition - this is probably one of the most frequent causes, owing to great irritation it produces. There are many more causes to which Infants are contiguous, that conspire to produce this disease.
But Professor Potter says, that we may have all those last named causes existing, and we cannot have a complete case of Cholera, unless we have the "sine qua non heat." - -
Symptoms. The symptoms by which this disease is known are various, and differ much according to its types. Its course is marked with much uncertainty of success, as it has been known to prove fatal within a few-

hours, and again it may continue on for weeks and even months assuming a chronic form and finally terminate favorably.
There are few diseases that seems to possess the same power of prostrating the vital powers in so short a period as this one; and there are few that seem to tear asunder more readily the harmonizing ties of nature and as it were with a poisonous breath, quench the spark of innocent life.
It may first commence in a very gradual and moderate manner, but marked with distinct febrile action, and continue on with little else than diarrhea for some time without the stomach seeming to participate in any considerable manner.
The tongue is generally coated with a whitish or yellow fur, thirst urgent. appetite impaired, and the skin loses its general appearance & moist and pliant feel. The diarrhoea that attends, seems to be of somewhat a bilious character.

which marks the congestion working within. Should this be checked by improper remedies, or cease, another stage will be brought on. fraught with dangerous consequences. violent vomiting and purging; the fluids are of an irritated character and sometimes they are mixed with bile. the fever attending is of a broken kind. That which is ejected from the stomach by the first acts of vomiting is milk in a very acid state. This is soon followed by mucus and slime. Should the disease be ushered in by purging, the discharges at first, are very offensive and irritated. At first they may consist of a light coloured fluid, changing to a green or yellow colour, mixed with mucus and slime. The Green and Yellow fluids may diminish, but the mucus and slime increases. Professor Potter mentions that the fluids evacuated from the stomach and intestines, often resembles a solution of indigo.

The appearance of these discharges must be owing to the existing state of the liver.
In this stage it is said, that we find the extremities cold, or much below their natural temperature, while there is an increase of temperature of the head, breast and abdomen. A flush is upon the cheek, while the hands and feet are of a pale and livid colour;- The pulse at the wrist is small and weak, while at the temporal and carotid arteries it is full and strong- marking the great tendency of blood to the brain-.
In violent attacks of this disease, there is frequently spasms of the abdominal muscles, and not unfrequently general convulsions.
Delirium may also attend it. from the great flow of blood to the head.
In more advanced stages of this disease we may find the abdomen tympanitic;- this, seems to be from the accumulation of gas within the intestines. A hot and dry skin.

intense thirst, dry tongue &c. In the last stages vomitings of a dark green, black, or of an ash colour, voided in the greatest quantity. Blood may also be discharged. But Dr. Potter says this is not systematic. Should all these symptoms, be allowed to run on from stage to stage; the little sufferer would soon show to us, the demon finger of disease: its emaciated form, its sunken eye, its bloodless cheek, its body bedewed with a cold and clammy moisture, would speak in words that language fails to describe the blissful mansions of an immortal Heaven.

When the inflammation runs on, and serous effusions take place within the Brain; or structural derangement of some of the abdominal viscera; the breathing becomes hurried and laborious, the pulse weak, quick and irregular, and death unmantles shuts the scene.

Doctor Drewes mentions that in the last stages, when death is about to ensue, watery vesicles appearing on the chest. But these may pass unnoticed, by the superficial observer, as they are not very distinct. From what he has said that must be one of the most certain prognostic signs of a fatal termination. Doctor Eberle remarks that "aphthæ usually appear on the tongue and inside of the cheeks." and also that there are frequently spots of effused blood on various parts of the surface.

After taking this limited view of the symptoms of this disease; it will next become necessary to make some enquiry in relation to its pathology. It is to that part of our science, that the eye of every practitioner must be directed, if he wishes to treat disease successfully. It will be for him, the Polar star that will guide and direct him through the many obscu=

rities of disease. But should ignorance prevail; in relation to this part of our science what can be expected? difficulties would surmount difficulties, and in the case of disease we would be like a "Lost Ship upon the Ocean wave" From post mortem examinations and dissections the Pathology of this disease has been made manifest. The Brain from these investigations has been found to present many morbid appearances.
Water in the ventricles has been long noticed. But Professor Potter says that it is not water, as has been supposed, but it is an actual secretion, taking place either in consequence of violent reaction soon after the commencement of the disease, or under a more slow and continued form of the fever. and he says, that not only inflammation of the "arachnoid membrane will be found, but

also in the brain, dura & pia mater.
Should this inflammation not be reduced,
or arrested in a speedy and prompt man=
ner, a deposit of fluid will take place
within the ventricles.
When the disease passes slowly into the last
stage, the fluid that is secreted seems
to be from the arachnoid membrane.
Should the fluid be in a considerable
quantity, the marks of inflammation are
rather indistinct. Although the membra=
ne is found thickened and opaque.
There also seems to be much congestion
in the Portal circle, This is, and may
be readily distinguished if attention be
paid to the appearance of the evacuations
And we know, that as long as the func=
tions of this organ (the Liver) are disturbed,
and its secretions are locked up at it
were, our agents, unless directed to where
this condition, are as "idle as the wind"

But so soon as its secretions are restored convalescence generally speaking, speedily ensues -
There is also generally I believe a distention of the spleen, and liver, the sensation is remarkably acute when pressure is made on that region.
The stomach, tho' its functions are so much deranged, does not bear the same marks of violence as the intestines. Be that as it may, the traces of inflammation are distinct, on its mucous surface. and when the disease is of long continuance a thickening may occur.
The intestines seem to participate in almost all cases of this disease. But the inflammation that has commenced in the mucous membrane, is not wholly confined to that structure. The Mesenteric glands are frequently involved by it. And hence the disease takes on a chronic form

the office of these glands are much pre=
vented. In scrofulous subjects, as men=
tioned by Professor Potter these glands
are more likely to be found enlarged.
Ulceration of the follicular structure of
the intestines, involving other membranes
is said by some to be first apthous, this
is an undecided point, and to take into
consideration all the views on this subject.
I think would be altogether superfluous.
<u>Prophylactics</u>. If due attention be paid
to the prophylactics of Cholera Infantum
an attack of this disease may prob=
ably be prevented, which otherwise
might occur. The means to which
we resort are principally the follow=
ing. The best and surest way to
avoid the disease, is to move from
those places which are generally in=
fected by the disease during the
hot months of summer. This should

be done before the predispositions has seized upon the vitals of the constitution, and laid the foundation of the disease. The most eligible situation is that which is surrounded by trees, which serves as a protection from the influence of the sun.
Those situations that have long been cultivated and exposed, should not be chosen, for they are not in themselves totally exempt from the disease. Proper exercise may be taken morning and evening.— Cleanliness should be attended too, as no effluviums should be allowed to generate about the apartments of Children. The skin should be kept clean, so that there shall be no obstruction to the insensible perspiration.— Flannel should be worn, and the vicissitudes of weather, particularly guarded against, as they may readily

become exciting causes.
Children should never be weaned between the months of May and October, for then is no cause from which this disease more frequently arises. Being deprived of the Breast, they are supposed to eat all kinds of irritating articles of diet which seldom fails to bring on an attack of this disease. "Nine tenths" says Professor Potter "of those who are deprived of the breast between the months of May and October suffer from an attack of Cholera."
Should the Infant be not weaned, little else is necessary for it, except that which it receives from the Mother.
During the progress of dentition, if the gums should become much swollen and produce much irritation, they should be immediately divided.
These I believe are all the directions necessary to prevent or secure the infant

from this disease.

Treatment. If we direct our attention to the pathology of this disease, the indications for a successful treatment will make themselves manifest.

We must first ascertain what organ is seeming to be the most affected, and then, direct our agents in such a manner as is best calculated to relieve that organ.

We should when called to see a patient labouring under this disease, make our inquiry in such a manner as to reflect every possible light on the subject. So that we may advance in our treatment, with safety and success.

The first object that we must have in view, is to prevent cerebral irritation, if possible;— relieve the torpid state of the Skin and Liver;— and calm the irritability of the Stomach and Intestines.

Should there be a considerable degree of fever, with a tense pulse - and a tendency of blood to the brain; - or congestion seeming to be forming in some other organ; we may take blood from the arm, - or if the brain be much impressed, the Temporal artery may be opened - If the pulse be small or frequent it should not deter us from bleeding provided it be tense - This practice though condemned by some is I think one of the surest means that we can employ in this form of the disease - True, it does not always require so energetic a practice: but should febrile symptoms run high, and inflammation indicatively insinuating itself; - we have no means by which we can check its rapid progress so prompt and decisive as bloodletting - Therefore, what objection can there be urged against the judicious

use of the Lancet, any more in this disease than in any other of an inflammatory or congestive character? Shall we see inflamation and congestion, rallying round the sparks of vitality; clouding our brightest hopes and not unsheath our Lancet? No. This is the moment for action - and then let us be up and doing.

Local bleeding is much relied on in the treatment of this disease - and doubtless, it is a remedy of inestimable value. It is more frequently indicated than general; and the success that has attended speaks loudly in its favour.

Doctor Eberle is a strenuous advocate for its employment. He advises ten or twelve leeches to be applied to the temples. Also he speaks very favorably of blisters behind the Ears and thinks it to be the most efficient practice

that he has ever pursued. From the combined experience of many, this is a remedy well worthy of a trial;— And it is one I feel well assured is quite indispensable in many cases— After the use of bloodletting either general or local we must resort to other measures that are calculated to calm the irritability of the stomach and intestines; arrest that torpid condition of the Liver and relieve the congestion of other organs that are intimately connected in this disease. To fulfil our indications here, we must rely on the action of Mercury. There is no remedy in the hands of the practicianer, that seems to have the same power of subduing this disease if used in small doses as the one under consideration— It is one that can be safely used in almost any stage of disease after the general fever is somewhat

reduced in its violence by general or local bleeding. It breaks in upon the morbid train of symptoms in a very prompt and decisive manner. It cools ~~the~~ the irritable state of the stomach & intestines — restores a healthy secretion of the Liver, and also that of the Skin —

Doctor Eberle recommends it to be used in combination with Ipecacuanha. In the following proportion. one sixth to one fourth of a grain of Calomel in union with half a grain of Ipecacuanha. to be given every hour or two while the evacuations are of a bilious character. It is certain that so long as the Liver remains torpid the disease still progresses at its violence. But if bile be mixed with the evacuations, it may be hailed as one of the most favourable signs of recovery —

Professor Potter speaks very highly of this remedy, and advises it to be given in

doses of half a grain to children above the age of Eighteen Months, and under this age half the quantity - Morning Noon & Night. There are certain external applications that have gained much praise in the treatment of Cholera Infantum, being that they act as rebutives. They are most frequently applied over the stomach and Liver. Dr. Eberle is of the opinion that an application of a blister over the stomach is one of the ~~[illegible]~~ best auxilliaries in our profession. But he thinks that it should not be allowed to remain on longer than there is a redness of the skin produced, and it should be dressed with Emollient poultices. —

Stimulating cataplasms and rubifacients have been used. These Cataplasms are sometimes made of herbs and spices. Professor Griffith recommends the spice plaster very highly - and says that he

has used it with great success - He also says that it assists very much in putting a stop to the violent vomiting and purging - The Ol. Monarda. Spt. Turpentine, and even the dilute Nitric Acid when an effect is wished to be speedily produced - These remedies may frequently be productive of good effects, if used properly - But like many other remedies they are not without objections -

Cathartics are medicines that are frequently used in this disease, and should not be neglected - The milder kind are generally used - such as Castor oil - Magnesia, Rhubarb, &c - The bowels should always be kept soluble - This may be done by the use of Calomel - and often it becomes necessary to increase the dose to have this effect.

Injections in the advanced stages of this disease are highly necessary and many Practitioners

have used them with great success. When the power of the intestines is much prostrated - and there is much tenderness. an Anodyne injection may relieve the symptoms very much -

Emetics were at one time much relied on in the treatment of this disease. But experience has taught us that they are sometimes fraught with dangerous consequences - In the first stage of the disease they may be useful - or if we wish to evacuate something from the stomach that has been taken in. If we use emetics there that are the least irritating are the best.

Ipecacuanha is very good or as recommended by Professor Potter Common Salt. in solution -

When from a long continuance of the disease attended with much exhaustion, stimulants may be used with advantage. It becomes necessary to support the vital energies of

the System. For this purpose we can use Wine whey. or a weak Solution of the Carbonate of Ammonia. External Stimulants should also be used such as Stimulating friction &c.

There are many other remedies that have been used in the cure of this disease such as Alkalies. Astringents. &c. Which I think need no comment. Suffice to say, that if we place our reliance on Blood letting. General and local, Calomel and some of the external applications we will seldom fail to cure this disease. But our remedies may all fail if due attention is not paid to Nursing.

As soon as convenient the little patient should be removed to the country. This may often effect more, than all the remedies of a skillful Physician.

An

Inaugural Dissertation on Cynanche Trachealis

Submitted to the examination of the

Provost, Trustees and Medical Faculty of the

University of Maryland

for the degree of

Doctor of Medicine

by Henry Waters of Maryland

on the 15th February 1837

Preface

In selecting a subject for my dissertation I have made choice of Cynanche Trachealis; it being quite prevalent in our country and also as I consider it a disease which; from its fatality among children, when not properly treated, deserves particular attention. I do not expect to add any thing to the Science, or advance any thing which is new, being conscious of my inability to do the subject justice; but merely write this little work in compliance with the requesitions of this Institution; and hope that my inexperience will be a sufficient apology for its many imperfections

Cynanche Trachealis

This disease has been known by a number of names, as Cynanche Trachealis, Tracheaetis, Hives, and more generally known to the populace by the name of Croup. It is an inflammation of the mocous membrane of the Trachea. This disease was not described with any degree of clearness by the ancient authors The first regular history of it is to be found in the letters of Martin Ghishi, 1749. Dr Home of Edinburgh made it known to the practitioners of Great Britain by his Enquiry into the Croup published in 1765. For the fullest account of the disease which has since appeared we are indebted to Dr Cheyne.

Symptoms

This disease is characterized by inflammatory fever, a sonorous inspiration of

a very peculiar character, and difficult respiration aggravated in paroxysms. It prevails chiefly from the first to third year of life; and though occasionally met with as late as the tenth or twelfth year, it is clear that the tendency to it diminishes as life advances. The almost complete immunity from this disease enjoyed by adults is perhaps referable to some alteration which the mucous membrane of the Trachea undergoes about the age of puberty. Dr Potter does not consider adults altogether exempt from the disease having witnessed more than twenty cases of distinctly marked inflammation of the Trachea in adults within the last twenty years. The true symptoms of croup are often preceded by those of common catarrh, and sometimes by the usual sore throat. Occasionally, however, they show themselves from the very first coming

on towards the evening or during the ni-ght. the child wakes during the night with an unusual cough; and the inspirations, particularly those which immediately follow the cough, are long, and attended with that crowing noise, which is the most striking characteristic of the disease. Feverish symptoms succeed and often run high. The pulse is frequent and hard with thirst and extreme restlessness. The natural functions as well as those of the brain, are not always disturbed to a corresponding degree. I have seen the child taking food and running about, while the disease was making rapid progress. If the symptoms proceed unchecked, they are suddenly aggravated. Respiration becomes more laborious, the cough troublesome, and expectoration difficult, untill the child dies either suddenly in a paroxysm of

dyspnoea, or more gradually by suffocation. The usual duration of the disease when violent and unaided by medical treatment, is about thirtysix or forty hours. Its danger is such that if the alarming symptoms are not moderated during the first twelve hours it generally proves fatal. If by the efforts of nature or art the child recovers what has been called the second stage, the convalescence is tedious and is attended by the expectoration of portions of a membrane, whose origin and nature I shall presently notice. In a milder form of the disease where the difficulty of breathing is not so urgent at the commencement the cough about the second day becomes loose, and the skin moist, the fever abates, and the voice gradually recovers its natural tone. The disease terminates by a spontaneous flow of perspiration, by vomiting, diarrhoea, a discharge

of phlegm from the nose, by salivation, by by a copious sediment from the urine, and by an eruption of little red blotches on the surface

Causes

The most usual exciting cause of this disease is cold; and particularly exposure to a damp atmosphere. It prevails, therefore, chiefly in winter and spring: and is more common in the cold and temperate climates than between the tropics. Children that have once had the disease, are liable to have the disease renewed on the application of very slight causes. A common catarrh will, in such constitutions, be often attended by croupy symptoms, untill the thirteenth or fourteenth years of life. Second attacks of croup are seldom so violent as the first but they always require the utmost caution on the part of the practitioner

Dr Gregory considers this disease in its most malignant form capable of being communicated by contagion. Dr Potter thinks it no more contagious than Pneumonia or Rheumatism; but that it sometimes hereditary. He thinks that it is as often founded on hereditary predisposition as Gout or Phthisis. and that this proclivity to Tracheaitis does not always depend on a scrofulous diathesis. This in his opinion is one of the sources of error. Because several children in the same family are affected at the same time, they are supposed to have contracted it by contagion.

Diagnosis

The Croup is distinguished from Asthma by the ringing crowing sound, by the shrill small voice, the high coloured urine, and the febrile heat which appear in Croup: in Asthma there is little or no cough, and there is some evacuation such as belching

vomiting or purging; the pulse is not febrile nor full; the urine is limpid and the voice croaking and deep.

Prognosis

This disease is always to be regarded as a very dangerous affection. Formerly the majority of cases terminated fatally; but under the present state of our improved pathology and mode of our remediate management, the proportion of fatal cases is greatly diminished. Frightfull and unmanageable as this disease is, when suffered to pursue its course uncontrolled, or when opposed by inadequate means, it is nevertheless, as much under the dominion of of prompt and vigorous antiphlogistic treatment, nearly, as any of the more serious phlegmasial affections. The degree of danger is proportionate to the violence of the inflammation, and the extent to which it may have passed downwards into the

pulmonary passages. It would seem also that the more sudden the attack, when attended with strong febrile excitement the greater in general is the danger. The shriller and more sonorous the cough the more reason is there to apprehend danger. It must be observed, however, that the prognosis in this disease is often exceedingly fallacious. Sometimes the symptoms yield and promise a speedy convalescence, when a violent exacerbation will suddenly supervene and destroy the patient; and on the other hand, death may appear to be impending, when on the sudden expulsion of a membrane, or even without such an occurrence, a rapid change for the better, will ensues and lead on to full convalescence

Postmortem Appearances

Examination of the Trachea in those who die of Croup has made us acquainted with a very peculiar morbid

appearance: viz; an adventitious membra=ne or tube of coagulable lymph which is thrown out by the inflamed vessels of the Trachea and in a great measure blocks up the passage. It arises a little below the larynx and extends in ma=ny cases to the bifurcation of the bronchia; and is sometimes found not only throughout the bronchial bifurcations, but throughout many of their extreme ramifications into many of the smallest air cells. A semi purule=lent fluid is commonly found in the Tra=chea at the same time, and occasion=ally traces are also met with of pul=monic inflammation. Frequent as is the appearance of such a preternatu=ral membrane in those who die of Croup it is by no means to be consid=ered as a constant or necessary part of the disease. Its formation is often inde

-cated by the manner in which the chi-ld breathes; throwing the head back so as to put the trachea on the stretch. This is a secretion from inflamed vessels, and presents all the different consistencies from the smallest change from health to the secreting process perfectly formed in in-flammation. The condition of the vessels seems to be incompatible with secretion and in many dissections we find the vessels injected with red blood only. The secretion of the more compact form to which the appellation membrane has been applied, seems to be the fibrine of the blood, semi organized, such as we see it where adhesions are formed between membranous portions. If we macerat the membrane found in the Trachea and thus separate the internal softer parts from the more compact, we find it to consist of numerous rectangular fibrous lam

ellae completely identified with the fib-rine of the blood, collected by stirring it while flowing from a vein with a rough body, the red globules being wa-shed off. We have preserved and com-pared these substances, and no Phys-iologist or Pathologist can discover the least difference. Chemically treated they cor-respond unless we say that the membran-ous matter imparts rather the character of albumen; but fibrine and albumen are so nearly allied that it is almost impossible to say in what the difference consists. Per-haps the greater portion of alkali in the latter renders it more soluble in water, but we dare not credit the asser-tion that fibrine will not dissolve in the same fluid, although it is with difficulty effected.

Treatment

It is unnecessary to give the treatment

of the Cynanche Trachealis of adults and that of children seperately as we have every reason to believe them the same disease; and whether they are so or not, experience has assured us that the mode of treatment in them is the same

Bloodletting

Most writers on this disease speak decidedly of the advantages of bloodletting. Some are of the opinion that it unquestionably holds the first place of all the remedies used in Croup. It is in the early stage of the disease that bloodletting is usefull. When the pulse becomes small, weak and soft as happens in the latter stage bloodletting is no longer proper. The sonorous cough which has sometimes been compared to the barking of a small dog or fox is occasioned by the rigidity of the inflamed muscles. In such cases the voice is much louder and more

shrill than in health. Nothing but blood-letting freely will remove this inflammation in its highest degree. After bloodletting has been determined on, with respect to the extent to which it should be carried we must be guided by several circumstances, such as the state of the pulse, age & habit of body of the patient &c. Dr Home ordered five ounces of blood to be taken from a child of fifteen months labouring under croup. The pulse still remaining hard he ordered a repetition of the bloodletting to the same extent on the same day. On the following day he ordered the child to be bled largely with leeches, and these repeated evacuations were followed by the best effects. We seldom however find it necessary to carry bloodletting as far as this. It has been proposed as in similar cases to let blood from the jugular vein; when it can be conveniently

donetis the best. From the best experience in the United States the blood should be promptly and freely taken till the pulse flags, in children three or four years old; but where the child is very young the rapid detraction of blood is sometimes followed by fainting which is fatal; bleeding by leeches in very young subjects is therefore preferable.

Cathartics

With regard to cathasis in Croup, if we employ it with a view to diminish the inflammatory diathesis, what has been said of bloodletting is nearly applicable here. Bloodletting however answers this purpose much better, and cathartics are only necessary for the regular and free excitement of the bowels. Dr Rush particularly recommends calomel in the Croup and thinks it is possessed of some specific power independently of the evacuations it occasions. The

bark, he says, is hardly a more certain reme-
-dy in intermittents than calomel in the croup
if a large dose be given at the commencem-
-ent, and small doses continued throughout
its course. Calomel is no doubt a valuable
purgative, and should be freely used in
this disease; but other remedies must assist.
As it runs its course rapidly, salivation must
not be relied on as important to the cure. Dr. Pot-
-ter thinks it is usually prescribed in doses so in-
significant that the practice is rather cal
-culated to injure the reputation of the me
-dicine than cure the disease. He says every
physician who is much conversant with this
disease, and has accurately weighed the mer
its of the several means employed, will ad
mit that if we were restricted to a
single remedy he would accept the cal
-omel. But says he there's no necessity for
relying on emetics; bloodletting or mercury
alone; but by a judicious combination of

calomel, tartrate of antimony, and carbonate of potash, any case of croup in its early stage may be cured (unless in its highest degree of inflammation, or where the muscles are the principal seat of the disease) The quantity of this mixture cannot be well ascertained; but should always be given once in a quarter or half hour untill the pulse shall have been nearly imperceptible. The above mixture with the lancet are the bestemedies on which Dr. Potter principally relies in the treatment of Croup. when they have produced the most salutary effects Calomel alone will generally succeed, but there are very few who will venture to give one or two hundred grains in a single night which is often indispensable, and can scarcely fail to accomplish all we could desire. The apprehensions of a severe ptyalism deters many from employing this safe, and incomparable remedy, although it

is almost always groundless. Dr Potter has never seen but one instance of salivation in Croup out of several hundred. In the turgid state of the stomach it is beyond all others medicines effectual in accumulating the diminished excitability, which seems soon to pervade the whole sentient system

Emetics

Emetics are used in Croup with a double view. At an early period with a view of cutting short the disease; in a more advanced stage with a view of expelling the preternatural membrane, which is often brought up by the act of vomiting. In the forming stage, a vomit of antimonial wine, lobelia inflata, tartar emetic or ipecacuanha, or oxymel of squill which will operate two or three times generally puts an immediate stop to the disease. It is generally proper however to begin with bloodletting by which more

than one advantage is gained. We both take the earlist opportunity of employing the remedy on which we place the most reliance; and lessening the determination of blood to the head during the operation of the emetic. The use of the corrosive muriate of mercury as an emetic in this disease has been considered problematical by some and dangerous by others. Experience will always determine in its favor under circumstances to which its use should be restricted. In that insensible state of the stomach which is so often to be observed, where the excited fluid impedes the passage of air into the lungs. the sublimate affords a prompt safe and efficacious emetic and has arrested the progress of the patient to the grave. One grain dissolved in an ounce of water will be sufficiently strong. if a teaspoonfull be given

every fifteen or twenty minutes, untill until a complete emesis shall have been produced It often excites a soreness in the gums; but scarcely ever a profuse salivation

Diaphoretics

There is also much difference of opinion respecting the use of diaphoretics in the Croup Almost all authers however recommend the fedeluvium and also the warm. Dr Potter considers the warm bath usefull after the inflammatory action is subdued. Next to the warm bath nauseating doses appear to be the most usefull diaphoretics in the Croup

Expectorants

Some of the remedies termed expectorants are usefull in the disease. The decoction of senega shake root. in the dose of a teaspoonfull every half hour; gum ammoniac. syrup of onions. antimonial wine and laudanum and assafoetida are

highly usefull as expectorants in the last stage of this disease. Opiates after the symptoms are allayed by bloodletting are often serviceable. By allaying the cough they render the matter to be expectorated thicker and consequently the expectoration more easy. Their employment requires, however, caution both on account of the inflammatory nature of the disease, and because we cannot greatly allay the cough without increasing the dyspnoea. While the inflammatory symptoms continue the diet should be very diluent and strictly antiphlogistic. It may be usefull when the symptoms run to abstain from food of every kind for the first twenty four hours. Nitre is a good addition to the drink. Such are the remedies acting on the constitution in general; it remains for me to speak of the local remedies employed in this disease. Taking of blo

from the external fauces is highly recommended by some, which should be repeated according to the symptoms. After proper evacuations blisters are of great use. They should be applied as near as possable to the part affected. There is perhaps no other form of Cynanche in which breathing the steam of vinegar and water is so beneficial as in this. In whatever manner it acts, whether by mixing with and diluting the thick matter which clogs the bronchial vessels, or by its stimulating quality increasing the secretion from them, it is found to lessen the cough, to promote expectoration, and relieve the dyspnoea. The operation of Bronchotomy has been suggested; but in Croup I believe it to be altogether inadmissible, for this reason, that the membrane which is generally the cause of death, extends into the ramifications of the Trachea, and the air cells of the

lungs, and produces death by obstructing the passage of air into them. The mere opening of the Trachea would be of no use, as the air passages would still be obstructed lower down. Three cases, however, of its success are recorded; in these mucous appeared to be the cause of the obstruction

An

Inaugural Dissertation, by

On Epilepsy

By Jno. R. Bierwirth.

Submitted to the Provost, ~~and~~ and Medical Faculty Trustees of the University of Maryland

For the degree of

Doctor of Medicine.

To

Dr. E. Geddings, Professor of Anatomy and Physiology in the University of Maryland,

This Dissertation is inscribed.
As a slight tribute of respect for his Professional attainments.
And as a testimony of the esteem, the gratitude and respectful attachment of his friend and pupil.

February 15th 1837.

Jno R Buckworth

EPILEPSY.

Epilepsy, may be considered one of the most distressing and deplorable maladies that man is heir to. From its effects upon the mind, in impairing the understanding, and producing almost total abolition of the rational powers, it often leads to a condition, infinitely more to be lamented than death it self. So frightful a disease could not fail to attract the attention of almost every one, of any age, To hear the appalling shriek, and behold the convulsed and distorted features of the unhappy victim, could only create feelings of the deepest sympathy, in the bosome of its beholders, and serve as an incentive to endeavour to devise some remedy, at least as a palliative for its distressing symptoms, hence, we may find some excuse for the numberless nostrums, and quack remedies, that have been used and trumpeted to the world as almost specifics.

This Disease has been discribed under various

names, from the different impressions which it made upon the minds of those who witnessed its frightful effects. Viz, Morbus, Sacer, Morbus hercules, Morb. divinus, Morb. Comitialis, Mor. Caducus. falling sickness &c,

Epilepsy, may be defined a disease primarily seated in the nervous system manifested by convulsions occuring at uncertain periods, in paroxysm, accompanied by a temporary loss of consciousness, sense and voluntary motion, and terminating in somnolency. The Epileptic attack frequently comes on suddenly without any manifestation of its approach. More frequently however, certain symptoms precede the occurrence of the paroxysm, and of these the following are the most common.

A peculiar confusion and distressing feeling in the head, an absent, wandering, and confused state of the mind, giddiness, dimness of sight, sparks and flashes of light before the eyes, ringing and loud sounds in the ears, distention of the veins of the head and neck, a trembling and feeling

of restlessness in the extremities, an anxious feeling in the precordial region, restlessness and startling during sleep, loss of the power of distinct articulation, complete temporary deafness, and drowsiness, in some instances there is a manifest change in the moral disposition a short time before the accession of the attack, sullen glooming with an irritable temper is manifested by some patients; in some cases the mind falls into a kind of reverie, from which it cannot be drawn which terminates often speedily in total insensibility, some Epileptics evince an unusual timid disposition, others are spiteful revengful, and mischievous. Shortly before the accession of paroxysm, occasionaly spasmodic twitches of particular muscles, especially in those of the face precede the attack. Some authors state, that painfull sensations in certain parts of the body, particularly, spasmodic pains in the stomach, with a rumbling noise in the bowels, occur as the precursors of epileptic paroxysm.

But the most remarkable of the premonitory symptoms of epilepsy, is that which is technically called Aura Epileptica, which is a sensation compared by patients, to a stream of water, or current of air, or slight convulsive tremor, ascending from a part of the body, or the extremities to the head, when the patient instantly becomes insensible and epileptic. This sensation has been first felt in, and seemingly has arisen from various parts of the body. From the toe, foot, leg, groin, from the finger, hand, arm, from the bottom of the spine, ankles, loins, abdomen, and chest. Dear Sewall remarks, that the epileptic fit does not always take place, when the patient is thus menaced with it. For premonitory symptoms of epilepsy often occur, not only vertigo headache, false perceptions, but convulsions in a limb, or in one side of the face, with weakness, headach and a degree of stupor, after which the patient recovers, without the convulsions becoming universal, or insensibility complete. But some authors have described these

attacks as partial epilepsy, I would rather think that like the aura, they are mere threatenings of a fit.

In many instances, the attack always occurs at night while the patient is sleeping. In this respect it differs conspicuously from Chorea, the convulsive motions of which, however violent during the day are almost always wholly suspended during sound sleep.

Some patients are enabled by these symptoms particularly the aura to tell with accuracy the nearness of the attack, and to avail themselves of this intimation to place themselves in an attitude, in which they will be less liable to sustain injury during the attack.

When the epileptic attack occurs while the patient is sitting or standing, he suddenly falls down, with a scream, the most startling of sounds that can be uttered, which has been said, to produce in female auditors, an hysteric fit, abortion, or even eclampsia.

When horror struck, by the scream, we turn to the patient, we often find him insensible and violently convulsed, particularly of the extensor muscles, In some cases the convulsive actions of the muscles of the face frightfully violent, his eyes may be observed fixed and staring, and sometimes rolling, his lips and eyelids convulsed, eyebrows contracted and lowering, he appears to draw back from the beholder with a fixed and threatening look, which however it immediately becomes apparent, is but a unclip gaze, in some patients the complexion is leaden, in others it is flushed even to duskiness, the muscles are alternately relaxed and contracted, the spasms being what are called Clonic, the convulsions are sometimes so violent as to produce dislocation of the arm, and a case is mentioned, where in a young lady the lower jaw was found dislocated at the end of every paroxysm, and some have stated, that they have seen the teeth fractured by the violent contraction of the muscles, which elevate the jaw, the tongue is often protruded and

is then almost always bitten, sometimes nearly through, sometimes the sides of the tongue after the fit are found raggid and bleeding, having been gnawed by the teeth, the frothy saliva forced from the mouth, is often tinged with blood from the wound in the tongue, the neck appears swollen, rapid nistitation takes place and the mouth is sometimes strongly distorted, The diaphragm abdominal muscles and muscular coat of the bladder, overcome the resistance of the sphincters, expell the faces and urine, and in many instances there are strong erections of the penis, with spasmodic retractions of the testicles and occasional seminal discharge, The heart palpitates violently, the pulse is usually contracted, irregular and frequent, and respiration oppressed, laborious and in violent cases sonorous, Sooner or later the spasmodic symtoms abate, generally gradually, but sometimes abruptly, The countenance becomes more composed, the pulse more full and regular the respiration more free, and the patient

finally falls into a state of stupor or deep sleep, out of which, he awakens with a feeling of languor and confusion and torpor of mind, which continues for eight or twelve hours; after which the countenance exhibits a vacant and stupid expression, and the eyes are dull staring and wandering, In some attacks the mind remains obtuse and fatuous, and the temper irritable and morose for several days after the paroxysm, While the patient is in a somnolent state, he usually perspires freely, particularly about the head, neck and breast, and the perspiration has frequently a very peculiar offensive smell, The sweating is sometimes confined to one side of the body only.

Death sometimes takes place unexpectedly in a paroxysm of epilepsy, occasioned as it is supposed by respiration being suspended, by spasm of the glottis or by congestion of the vessels of the brain, producing Apoplexy.

Epilepsy, however does not always assume the violent grade just discribed, The attacks frequently

come on suddenly, and after a few moments of partial convulsions, of the muscles of the face and neck, quickly subsides, and the patient is restored to consciousness, sometimes they are so slight, as not to be observed, and are overlooked by the patient and his friends.

In some patients epilepsy is congenital, in others it commences in childhood, in others in youth, manhood and even in old age, Sometimes when previously established, it subsides at puberity, and frequently especially in females, the disease commences, at that important epoch, There is much variety and uncertainty with respect to the return of the paroxysm, The attacks have been periodic, but much more frequently, they are irregular in their occurrence, Months, and years may intervene between the several attacks, while the slighter may return daily.

II. of Epilepsy. The morbid appearances discovered on dissection are often similar to those observed in apoplexy, and palsy, Generally there will be found some exemplification of disease structure in the

cranium, subjacent membranes, cerebrum, cerebellum, or spinal canal, At least works on morbid anatomy and treatises on epilepsy, have taught us to expect such appearances, In some dissections is discovered exostoses, or thickening of the bones in others, inflamation, or ulceration of the membranes of the brain, of its surface or substance, in others vascular turgescence, effusions of various fluids induration or softening of the brain, tumors are sometimes detected, whether scirrhous, fatty, or sarcomatous, and lastly tubercles, or hydatids, But is not in every case that we find those appearances, frequently there cannot be any morbid change whatever discovered,

The Brothers Wenzel who have probably extended their investigations, on this subject, farther than any other anatomists, have come to the conclusion that the disease is seated in the Sphenoidal bone in the pineal gland, and the pituitary gland, but chiefly in the latter, Some French pathologists have pointed out, various morbid appearances of

the mucous membrane of the intestinal, as being intimately concerned in the causation of this disease. It is highly probable we shall never arrive at any correct conclusions as to its seat. The causes of Epilepsy are generally divided into proximate, predisposing and exciting or occasional. As to the proximate cause of this disease great diversity of opinion exists, but that the immediate cause of the paroxysm, whatever its character may be, is always seated in the brain, all will admit. As convulsions similar to those that attend epilepsy may be produced by the application of any irritant direct to that organ, as any part of the frame is agitated during the paroxysm, all the external senses, often being morbidly affected, just before the paroxysm, the whole muscular system agitated during it, and as not only the animal but the vital functions are universally perturbed, the proximate cause must be sought in the sensorium commune, as being the only part capable of exercising such an influence over the

whole body, but the nature of the disorder upon which the epileptic fit depends, will probably never be discovered. It cannot be vascular distention, since convulsions are often a consequence of loss of blood, (no other cause at the same time operating) and may be removed by stimulants. It cannot be vascular collapse, since convulsions sometimes depend upon plethora, and are relieved by spontaneous hemorrage, or by blood letting. And as long as we are ignorant of the nature of the healthy function of the brain, in what manner it is influenced, or is maintained, the deviation from the healthy exercise of its function, which constitutes the proximate cause of epilepsy must remain sub judice.

Causes. We generally find in patients subject to this disease, there exists a peculiar sensibility or irritability of the system, or in other words a liability to be influenced by causes which in other persons would be applied with little or no effect. This condition, it is conceived is generally derived from original

Stamina; and may more particularly depend either upon debility or upon a plethoric state of the system, patients of a Strumous diathesis are more subjects of this disease than any others. There are few epileptics in whom we do not find some of the more common symptoms of Scrofula. That it is a hereditary disease is generally admitted. If when consulted by a patient in this disease, we make diligent enquiry, we are almost always sure to find that some of his family have been subjected to epilepsy, if not a father or mother, an uncle or aunt, grandfather or grandmother have suffered from it.

or Exciting Causes. The exciting causes of Epilepsy are exceedingly various. of these some act immediately on the brain, and others make their impressions on distant parts, and affect the sensorium commune secondarily, through the medium of the nerves. The most common of the former variety of causes, are injuries and malformations of the Cranium exostoses from the internal surface

of the bones of the skull, spicules of bone driven in upon the brain, preternatural distention of cerebral vessels, various organic affections of the brain and effusions of different kinds within the cranium. Sudden and violent mental emotions, frequently produce this disease by a morbid excitement originated in the brain. One attack is brought on by a fright, probably the most frequent exciting cause of the disease, another by terror, grief, and other disagreeable sensorial and mental impressions have been known to give rise to Epilepsy. Strong odours, sudden and vivid light, loud and peculiar sounds and certain colours have produced this disease in weak and irritable habits. Causes of this kind are of course connected with idiosyncracies by which the influence of these exciting causes, is peculiarly favoured.

Among the causes of this disease that act upon the brain through the general system, gastric or intestinal irritation is perhaps the most common. It is most frequently from this cause

that children are affected with this disease. Worms and indeed every other substance which is capable of producing an irritation in the nervous extremities of the mucous membrane of the alimentary canal may give rise to this disease in weak and irritable subjects. The repulsion or drying up of chronic cutaneous eruptions particularly the itch and tinea capitis may produce epilepsy. The suppressions of habitual evacuations, whether sanguineous or serous is another powerful exciting cause of epilepsy. The suppression or morbidly postponement of the catemenial discharge even after the age of puberty, is particularly apt to give rise to this affection in females otherwise predisposed to it. Excessive evacuations are also among the exciting causes of epilepsy, and this is particularly the case with inordinate seminal evacuations either from excessive venery or masturbation. The abuse of opium in children has a tendency to produce this

malidy. Various poisons sometimes produce it and among the mineral poisons lead and arsenic are said to be the most apt to excite it. The habitual intemperate use of alcoholic liquors is a very common cause of epilepsy, It is probable that epilepsy from this cause proceeds from the combined influence of hepatic disordered and a constant preternatural determination of blood to the brain, Painful dentition pregnancy, and parturition occasionally excite this disorder. Atmospheric influences also have been supposed capable of exciting this disease. Great heat and cold and sudden vicissitudes of temperature are mentioned as exciting causes, but their influence in the production of this affection is perhaps rather predisposing than exciting.

Sis. The only disease that there is any probability of epilepsy being confounded is hysteria when this disease assumes the convulsive form. They may however be distinguished from each other by the following circumstances, In hysteria

convulsions; The countenance is less livid and distorted than in epilepsy, and there is seldome any foaming at the mouth, or profuse discharge of Saliva. Nor does it terminate in heavy sleep or in confused and torpid state of the mind, so general at the conclusion of an epileptic paroxysm. In hysteria there is the globus hystericus a symptom that will always characterise it from any other disease, there is an involuntary laughing and weeping, and in many instances a continuation of some degree of consciousness &c.

The immediate danger of the epileptic paroxysm is not very great, yet in relation to the probability of a cure, the prognosis is generally unfavourable. When it depends on organic disorder within the head, a cure is impossible. Epilepsy however unconnected with cerebral lesion, may sometimes be cured. That species of the disease which occurs in young females about the age of puberity, from irregularity in the menses, may frequently

be cured, and indeed not unfrequently disappears spontaneously, after the catamenia begin to flow regularly. The more frequent the attacks are repeated, the more dangerous it is, and the greater difficulty in effecting a cure, and when it commences soon after birth or in early infancy, it seldom yields to remediate treatment. When it occurs from functional derangement in some distant organ, as gastric or intestinal derangement, a cure may be accomplished. Epilepsy from moral causes, as violent anger or grief, is said to be very rarely cured, and also those cases which occur at night, to be more intractable than those that come on during the day. It has been affirmed by some, that it occasionally ceases spontaneously on a change of climate.

In no disease is the treatment so frequently pure empirical, as in the one under consideration. Often it is that we administer remedies without being able to give any other reason for so doing

than that they have been occasionally successfully employed, nevertheless in some instances we have at least sufficient light, in the symtomes and causes to lead us in some degree to a consistant or rational plan of treatment. Therefore the first object of the practitioner when called to a case of epilepsy, should be to enquire into the nature of its exciting cause, its duration, the time and manner of its first attack, the general constitutional habit of the patient, his previous or concomitant diseases, his habitude temper and disposition of mind, his probable hereditary predisposition, and in short every thing that can throw light on the particular character of the disease, and on the constitutional and acquired habits of the patient.

The premonitory symtoms are often sufficiently apparent and protracted to enable us by remedial means, to obviate the attack entirely or at least to suspend it for some time. It is asserted that when the premonitory

sensation, termed Aura, commences in one of the extremities, the paroxysm may be prevented by firmly applying a tourniquet or ligature upon the limb above the part from which the aura arises. It has also been asserted that the application of a tourniquet upon a leg has been known to put a speedy stop to the epileptic paroxysm, after it has actually supervened.

In persons of robust and plethoric habits, prompt and efficient blood letting has been known to keep off the epileptic attack. It has also been recommended to purge freely when the premonitory stage is protracted, with a view of obviating or palliating the impending paroxysm. Emetics are also spoken of with the same intention, but their tendency in this respect deserves but little attention. During the paroxysm it is our principal object, to diminish the preternatural congestion of the cerebral vessels. Therefore

when the patient is plethoric, and the signs of inordinate sanguineous congestion in the head are considerable, it will be prudent to abstract blood, and remove every thing that may compress the veins of the neck, or impede the free return of blood from the brain to the heart. The Patient should always be placed in the horizontal position, and precautions be taken to prevent him from being injured by the violence of the muscular commotion which the body is thrown, One of the first circumstances to be attended to, is to put something between the teeth, to prevent injury to the tongue, and it is often desirable to sprinkle cold water in the face, particularly when the convulsions are confined to the muscles connected with respiration,

But the most important part of the treatment of Epilepsy is that which is proper during the intervals of the paroxysms, for the purpose of effecting

a permanent removal of the disease.
Our attention must therefore be directed to the nature of the exciting cause of the disease. If therefore upon enquiry we find that the patient is subject to habitual costiveness, or that the bowels are in an irritated state, our remedies must be directed to obviate the one, and allay the other. It is from this cause that epilepsy is principally confined to infancy and childhood. It is in this variety that Emetics have been used, Absorbents and tonics are used in gastric disturbances.
If symtoms of intestinal worms are present. Anthelmintick remedies are indicated, small and repeated doses of Calomel, with an occasional dose of castor oil, in union with a small portion of turpentine or infusion of Spigelia will sometimes answer in such cases.
Should we find that it occurred from sudden suppression of the perspiration, Diaphoretics and whatever else, that will keep up a

regular action of the cutaneous exhalants should be resorted to.
When it arises from repeled cutaneous eruptions or the drying up of some habitual discharge. The manifest indication is to restore these affections, or if this is not done, to establish others artificially in their stead. For this purpose we may employ issues, setons, blisters, and particularly frictions with tartar emetic ointment, together with diaphoretics warm bathing and stimulating frictions.
When it occurs in young females in consequence of unsuccessful or imperfect menstrual effort, we must endeavour to remove the preternatural determination to the head, and to establish or restore the natural determination to the uterine system, and thereby promote the regular performance of the menstrual function. for this purpose bloodletting must be resorted to, we may also use frictions about the loins, back

and pubic region, and stimulating enemata with advantage. the Sinciputum is also a valuable remedy.

Epilepsy from local injuries of the head has been cured by surgical operations.

There are numerous remedies, which have been used by various eminent practitioners in this disease with occasional success. there we being resorted to without being able to assign any other satisfactory reason, than that they had proved sometimes successful in the hands of others.

Among the most celebrated of these anti-epileptic remedies, may be mentioned, Valerian, Mistletoe given in large doses, also Dippels animal oil, Oil of turpentine. The artimisia vulgaris has been used. The oxide of Zinc Ammoniacum, and nitrate of Silver have occasionally proven successful.

But whatever mode of treatment or remedies be resorted to, particular attention should

always be paid to proper regulations in relation to diet, exercise, and the action of the bowels.

An

Inaugural Dissertation

on

Hydrocephalus Internus.

Presented for the Examination

of the Provost Trustees

and

Medical Faculty

of

The University of Maryland

for the

Degree of

Doctor of Medicine

by

John H. Boon

of

Maryland

1837.

To

Nathan Potter M.D.

Professor of Theory and Practice of medicine in the University of Maryland.

Sir.

Permit me to dedicate this essay to you, as a token of the high esteem and regard I entertain for your Professional talents, and the knowledge, and incontrovertible truths, of medicine, I have gained from an unremitting attention to the course of Lectures delivered by you in the University of Maryland, and also from your private Examinations.

I am,

Dear Sir

Your Friend and Pupil.

John Francis Boone

Hydrocephalus Internus.

This disease has received the appelation of numerous names. almost every author who has written upon the disease, have called it by a new name. Cullen enumerates it among the species of Apoplexy and calls it Apoplexy Hydrocephalica. Porter calls it. Encephalitis. Rush calls it. Phrenicus. Smith Hydencephalus, and it is called by John Good. Cephalitis Profunda. Gregory says in strict nosological language, it is the Phrenitis Hydrocephalica or the Phrenitis Infantum. The disease commonly called Hydrocephalus. or water in the brain. by Drs. Carmichael Smith Yeates and Coindet. denominated Hydrencephalus. has been classed by Sauvages, Linnaeus, and Sagar, among the Local Dropsies. and divided into internal and External. The water in the former being situated in the ventricles of the brain. in the latter. in the integuments of the

head. The disease though common was not described until about the year 1718 when M. Petit, published an account of some of the most important symptoms, in the memoirs of the academy of science. In 1753 in account of it was published by a surgeon of Glasgow. However from all we can gain upon this subject, we are enabled to say, that it was not described as a distinct disease, until the year 1768, when Dr Whytt published an account of it.

The disease has been very accurately described, since the publication of Whytt's treatise, by Drs. Fothergill, Cheyne, Carmichael Smith, Yeates, and Coindet. Yet the subject is so far from being exausted, that the disease is universally admitted, both in Pathology and Practice to be still involved in great obscurity.

Hydrocephalus Internus, in its confirmed

state has been generally considered a dangerous disease. it may perhaps be prevented or in its incipient stage be cured by the timely employament of proper means. it is therefore of the utmost consequence that we should be acquainted with the symptoms denoting its approach, or the danger of its accession. Dr. Yeates in a publication has taken great pains to point out those symptoms, and endeavours to impress the necessity of a watchful attention to them, and the fatal consequences if those symptoms are neglected.

Before I enter upon the consideration of the symptoms which indicate the presence of water upon brain. I do not know I could do better than to give Dr. Yeates own words as to the symptoms by which we are led to recognise this horrible malady in its incipient state. amongst the symptoms which occur

in the very commencement of the disease. before any alarm is given. and before any person can possibly imagine. only from experience. that they will often terminate in water upon the brain. Dr. Yeates mention than as follows. "Occasional languor healthy appearance of the countenance in a transient paleness. and occasional collapse of the features. a dark colour line under each eye. with a dulness of that organs. hastiness. and an increased heat of the skin. capricious appetite. Occasional thirst. Costy state of the bowels. whiteness. and sometimes dryness of the tongue. without any morbid change of the pulse. being higher colour than natural. Costiveness. the stools being more than commonly consistent. and firm. and if examined attentively. showing that a diseased action has begun in those glands which pour there secretions

into the intestinal canal. The evacuation being much lighter than common. or sometimes tinged with a dark colour of a greenish cast. and accompanied with a quantity of slimy matter. noise and confusion in the head without pain. the scalp. however. feeling sore on being rub:d now the symptoms which Dr. Yeates has pointed out as occurring before any alarm is given. are which lead to Hydrocephalus. as it must be confessed equivocal. because they may have no connexion with the disease. but the precursors of some other. The symptoms which actually indicate water in the brain. enumerated by authors on the subject. are so many. and so various. that it is difficult to give them in a clear and comprehensive manner.

The symptoms are divided into several stages. according to different writers.

according to Whytt division we have three stages - or set of symptoms. according to Gregory. we have four. I shall adopt the same division. which Gregory has adopted. The symptoms which characterize the first stage. are those of common infantile fever. such as often accompany the state of dentition. or a foul stomach. or disordered state of the bowels. more especially when complicated with the presence of worms. the patient is drowsy. inactive. and peevish. the pulse quick. the skin hot. the sleep disturbed. there is some degree of nausea and vomiting. thirst. and loss of appetite. the symptoms have irregular exacerbations and remissions. and have been called infantile remittent fever. an exacerbation usually takes place towards evening. The second set of Hydrocephalic symptoms are those which more unequivocally direct attention to the head. as the seat of the

disease. They are head ach. sometimes diffused. and sometimes refered to one particular spot. often to one side. to which the patient reclines. impatience to light. flushed countenance. increased redness of the conjunctiva. contracted pupil. Tossing of the hand to the head. rolling of the head about. and occasional screaming. and shrieking without any obvious cause. with these. are join these symptoms. which we have term the symptoms of the fever with irregular paroxysms. or as Sprengel has call it "infantile remittent fever. heat of the skin. disturb secretion &c". and they denote that Pathologists have considered the state of acute inflamitory action of the vessels of the brain.

The symptoms which characterize the third stage are very different from those of the first and second. The pulse before quick. now becomes slow. intermitting or irregular.

The pupil which before was contracted. is now dilated. and ceases to contract on the approach of light. instead also of the patient being restless and tossing about his arms. he falls into a state of stupor and becomes insensible to things around him. The screaming fits occur often and he is constantly moaning. and he will often vomit. on being brought into the erect posture. These symptoms lead us now to suppose that water is found out from the vessels of the brain. particular those of the arachnoid membrane. and Choroid plexus. at this time any sudden exertion brings on a fit of convulsions. in which often the patient expires.
The fourth. and last stage is characterised by the rising to a hundred and fifty or more in a minute. and is small and feeble. The stools and urine pass involentary. inability, to swallow. spots and ecchy-

mosis appears on certain regions of the body. After making such a division of the stages and symptoms of the disease. we cannot rely upon such a division as being perfectly correct. for there is no one disease which Physicians differ so widely. as the one which we are now describing. the symptoms which we have laid down as characteristic of the different stages. may not be present. sometimes the first stage is entirely wanting and the first symptom is a convulsive fit. and again the pulse never becomes slow. and in a still larger majority of cases. that change which takes place from the slow to the rapid pulse which characterizes the fourth stage never occurs. and often we neither have a permanent contraction or dilatation of the pupils. but through the whole course of the disease an irregularity of the contraction of the iris may be observed. Complete Hemiplegia has been

sometimes met with. in all cases where this symptom is present. there is venous congestion of the brain.
The symptoms which Dr. Wright gives us as the characteristics of the disease are " the affection of the pulse, the inclination to vomit. an aversion to light. the dilatation of the pupils. and the slow respiration towards the close of the disease.
I might go on and occupy pages with the opinions of different authors ~~opinion~~ as regard the characteristic symptoms of the disease. for they are various. but I deem this useless and altogether unprofitable. and uncalled for at this time.
With regard to the duration of the disease opinions are multifarious. therefore I deem it not advisable to enter largely into the different opinions on the subject. Suffice it to say, the average is from three to four weeks.

On dissection of those who have died of the disease. various morbid appearances have been discovered. fulness of the blood vessels of the brain. and marks of arterial excitement. and even considerable inflamation of brain. and its membranes. derangement of the chylopoietic viscera. Tubercles. (Probably scrofulous) in the brain. on the surface of the Liver. or in the Lungs. Enlargement of Pineal gland. or of the Thalami nervorum opticorum. Sometimes a gelatinous effusion in the brain. or, between the Arachnoid and Pia mater. but the most general appearance is that of a watery fluid within the cranium. Either between the membranes. on the surface of the brain. or in the ventricles. in the majority of cases. a watery fluid has been found. and most generally in the lateral ventricles. Abercrombie mentions a case in which all the ventricles were distended with a watery fluid. Mylitt. mentions several cases in which

a watery fluid was found in the ventricles. but I has never seen it between the dura mater and the brain. Cheyne says" upon dissections. I generally find within the cranium the veins. particular those of the membranes. on the surface of the brain. and lining of the ventricles. gorged with dark coloured blood. sometimes adhesions. and thickening of the membranes. and minute florid vessels on the surface of the pia mater. The brain often soft. friable. and particular so where it forms the ventricles. inflamed and constricted state of the intestines from spasm. The liver of a bright red colour. abounding in minute red vessels and adhesions to the Peritoneum."

This accurate observer has fully demonstrated the effect of increased arterial excitement. and inflamation. Dr. Abercrombie and others consider the serous effusion giving rise to the symptoms of Hydrocephalus Internus. as a consequence of chronic infla=

mations of the brain. Abercrombie says "the effusion may take place almost at any place within the cranium, and when it forms between the cranium and dura mater, it often escapes in considerable quantities, and gives rise to what is called Hydrocephalus Externus". Smyth on the contrary says: "marks of inflamation never occur after the true disease." he further says "I am confident that every anatomist, who is conversant with the dissections of this disease will agree with me, that neither the brain itself, nor its membranes, in any case of genuine Hydrocephalus, even dis upon examination shew any signs of inflamation, or of the usual effects of this having taking place." we might readily suppose, from this description of the Pattology of this disease, that Dr Smyth has never made a Post mortem examination, or was not acquainted with the effects of inflamation, for we have ample Proof to shew that inflamation is.

or has been present during the disease.
Respecting the nature of the fluid effused in this disease. various opinions are entertained amongst Physicians.
Drs. Carmichael Smyth. Watson. Cazenave. Bellini. Boerhaave. De Haen. Malpighi. Haller and several other. are of the opinion that it is a watery. colorless fluid. and will not coagulate by heat. or the mineral acids.
Dr. Bailie. Hawes. is of the opinion that it will coagulate.
From all the authorities which we have consulted upon this subject. we see a great differance of opinion with regard to the Pathology of the disease. While we see Sauvages. Whytt. Monroe. Rotheyill and Smyth. advocating the belief it is a dropsy of the brain. from a septum Sympathetic. or a laxity or weakness of the brain. whereby the small Exhalent arteries. pour out a Sympth. faster than the absorbents can take

inhibition, or by a too thin and watery state of the blood.

But we also, Cheyne, Rush, Yeates, Abercrombie and Coindet, advocating the belief that it is an inflammatory action, depending upon an increase arterial Excitement. Other authors might be Quoted with regard to the Pathology of the disease. But I think it would be unprofitable, as the opinions are various - but more modern Pathologist will agree that it is an increase arterial Excitement. But not such high arterial Excitement as Phrenitis. Dr. Potter says "that state of the vessels which causes the ~~fluid to be~~ fluids to be ~~secreted~~ extravasated, is analigous to, if it be not a secretion, and we think it will always be found, if we examine ~~with~~ the symptom that accompany this condition of the brain that the heart is less active than in common Phrenitis."

The only Predisposing cause of Hydrocept.

that is known is the Scrofulous Diathesis.
The remote or Exciting Causes are various.
Those who consider it as a species of dropsy,
refer it to such as produce dropsy, either to
the obstruction of the return of blood through
the veins or weakness general or Local.
Those who believe it to be an inflamitory affec-
tion of the brain, refer it to those of inflam-
mation in general.
Teething. Suppression of any Evacuation.
Constant crying. Dr Gregory says "we are
authorized in laying it down as a general
rule, that in all the febrile affections of
Children, there is a tendency to that form of
inflamation, which terminates in Hydrocep-
alus."
The Establishment of the diagnosis of Hy-
drocephalus in the Commencement is of the ut-
most importance, but unfortunately it is
difficult to ascertain its Existence,
until it has arrived at that state which

is almost beyond the aid of the most skilful Physician to subdue. In the history of the disease, I have collected from various authors the symptoms, and circumstances, supposed to indicate the probability of its accession, as well as those of its actual existence, and to a careful consideration of this history I must refer for the early diagnosis. Feverishness, and vomiting, and a diseased appearance of the evacuation from the bowels are mentioned by almost all writers, as the earliest symptoms of the disease. Dr. says - "Feverishness is always more or less present." Dr Cheyne, also says "that the disease in the first stage is always attended with an increase arterial excitement." Dein, Rush, Yeats, and Abercrombie are also of this opinion. These symptoms are equivocal, for they often occur in dentition, worms, &c. when we have not the least reason to suspect Hydrocephalus. "During the first stage" says Dr. Wolyth, "it is

very difficult to distinguish this disease from a slow irregular fever. occasion by worms, or some other disorder of the bowels." The continues" when with a slow and irregular pulse, with thirst, and a feverish heat, wandering, strabismus, or double sight, a delirium and screaming, succeeding the symptoms mention in the first stage, we may strongly suspect water in the brain, but they are still more striking when the patient grows comatose, the pupil dilate, and loose its motion, the pulse become weak, a flushed cheek the tendons start, and convulsions follow."

Drowsiness, fever with fits of vomiting, costiveness, with a morbid sensibility to light, inclination to lie down, moving the hands to the head, the pulse from being frequent and regular, now becomes slow and irregular, with a violent pain in the head, screaming, or a peculiar moan, pupil of the dilated, squinting, &c. are the most surest signs of the disease.

With regard to the Prognosis of the disease. it should generally be unfavourable. Except we can detect its existence in the first stage. for when it arrives at the second stage. owing to the great danger. we should give our prognosis very reluctantly. also the third stage possessing fewer chances of recovery - require the greatest secrecy in the Physician. in making up his prognosis. but in the fourth. we may generally make up our prognosis. as unfavourable. as I consider there is no chance of Recovery.

With regard to the Treatment of this disease great differences of opinion still exist among Physicians. and it would be almost a useless task to enumerate the different plans of treatment recommended by different Physicians in this disease. and as we derive but little advantage from the treatment recommended by those who first described the disease. I shall con-

tent myself with describing the treatment of the present day—

The great object of the Practitioner in this disease is to diminish that general inflammatory action, and the flow of blood to the head which exists during its early stages, and to promote the absorbtion of the effused fluid— These indications appear to be fulfilled by Bloodletting, Purgatives, mercury, and some External applications.

Bloodletting has been recommended, and practised, by those who consider the disease as an inflamatory one, with happy effects in its early stages, however some difference of opinion exists amongst Physicians. from this blood should be drawn, some recommend general bloodletting, while other Local, But we are led to believe, from the Pathology of the disease, that general bloodletting is always necessary in the com-

mencement of the disease, and often we can use both general and local with the happiest effects. Therefore we are not to discard either practice, for often it is we can use one with more advantage than they other. Dr Rush is an advocate for Bloodletting in this disease, the good effects of which he has illustrated in his practice. Dr Gregory recommends general bloodletting in the highest terms. He says" of the indispensible necessity of bloodletting in this disease. I can hardly express myself too strongly, much of the danger imputed to this disease is owing to the neglect of this evacuation". from all we can learn of this disease. I think we are justifiable in carrying Dr Gregorys Theory into practice, notwithstanding the authority we have against the use of the Lancet in the disease,

With regard to the use of Purgatives in the disease. is generally received by all who have written upon the disease. though great differences of opinion exist. as to the articles used—
Some have recomended the drastic cathartics while other have used the aperients— but a majority of the writers on this subject. have recomending the purgative neutral salts— in cases depending on a primary irritation of the alimentary canal. the mild aperient medicines should be used, after a thorough evacuation has been obtained. repeated doses of the more active purges. in such a case. would tend to increase the intestinal irritation. and consequently the cholaic affection. the mucous membrane of the alimentary canal may be found in a state of subacute inflamation. under these circumstances. the mild aperients would be more appropriate. than the more irritating articles.

in Idiopathic Hydrocephalus, however, the bowels are most always very torpid, and with difficulty can be moved, in these cases we must employ the more active purgative remedies.
in cases two, that are attended with a great accumulation of fecal matter in the intestines brisk and frequent purgations is particular necessary. "Hand we ascertain" says Dr Cheyne "that the alimentary canal is torpid, and imperfectly performing its functions, and admitting an accumulation of feculent matter, or that the secretions flowing into it are vitiated or diminished in quantity, a circumstance which we ascertain by the peculiarity in the appearances, or the pungent fetor of the stools, we must by steadily persuing the purgative plan, endeavour to effect a change, for while this is produced in the appearance of the stools, by the stimulating quality of our medicine, we are effecting a most important change in the Hepatic system, alimentary canal, and in all the parts, including every organ

of animal life, which is connected with them."
Drs. Cheyne and Rush are great advocates for purgatives in this disease, the latter says" I have constantly observed all patients, whose cases have been related, to have been relieved by plentiful and repeated evacuations from the bowels".
in cases, where there is reason to suspect worms, in the bowels, anthelmentics should be employed in conjunction with purgatives, an infusion of spigelia and semina may be used in such cases, the stomach, is so often irritable in this disease, that no articles will be retained for a sufficient time, to act on the bowels — where this state exists, we must endeavour in the first place, to allay the gastric irritability, and this may in general be effected, by minute doses of Calomel and Ipecacuanha, the one sixth of a grain of the former, with one third or one fourth of a grain of the latter, has repeatedly succeeded in the hands of Physicians, to restrain the tendency to vomiting in this disease,

with regard to the use of Calomel in the disease. it should always enter largely into our practice. I believe Drs. Dobson of Liverpool. and Percival of Manchester. first prescribed this medicine boldly in Hydrocephalus. it was in the 1775. when Dr Dobson proved the efficacy of this medicine in the disease. Dr. Percival relates a case of his own child by the use of mercury. several cases are related in the different Journals. of the success. which attended the exhibition of Calomel. mercury is highly recommended by Drs. Rush. Cheyne Yeates. Clark and many others.
mercury should always be carried so far as to produced its Constitutional effects on the system. I believe of all the unsuccessful cases. which are reported. from the use of mercury - is owing to it not being persevered in long enough - we should not only use it internally. but Externally in the form of the unguent. Hydrar. this may be rub on the body - two or three times a day. until it produces salivation.

Blistering in this disease is highly recomended in this disease. Cullen. Dunn. and many other think, that they should be applied to the head. and the discharge promoted for a considerable time. Dr. Rush is als of the same opinion. he says" Blisters have been universally recomended by all practical written. I have applied them to the head. temples. and neck. and generally with obvious relief to the pain of the head. they should be omitted in no stage of the disease. for even in the inflamatory stage. the discharge which they occasion from the vessels of the head. greatly counbalance their stimulating effects upon the whole system". Dr. Abercrombie. is of the opinion. that the use of blisters is ambigious." when they are employed" he says "it should be on the back of the head or neck. in that situation. they are more beneficial. than when applied over the whole head. as they do not interfere with a more

powerful remedy, the application of cold to the head." and I think general experience will decide in favour of Dr. Abercrombie as to the application of blisters.

Cold application applied to the head is highly recomended by Physicians, and we are warranted in saying, while the symptoms of arterial Excitement are present, we know of no external application which we can rely upon, as the use of cold application, it may be used in the manner of a bladder filled with ice, or ice water, or in the form of a clay cap, kept well moistened with ice water, or the cold Lotions—

James Powder has been highly recomended by some Physicians in this disease, it is strongly recomended by Dr Stokes of Dublin. he asserts that this preparation possesses a peculiar power of diminishing the determination of blood to the head. it may be conveniently given in combination with calomel in this affection. This practice is also recomended by Cheyne and Monro.

Digitalis has been recomended also in the disease. but experience teaches us it is too stimulating in its primary action. and at last lessens sensibility. at the expence of morbid excitement. squills have also been used. but of the good effect. I cannot not subscribe to from experience.

Dovers Powder has also been recomended by Drs. Brooke. Cheyne. Percival. and Crampton. after active depletion. and purgation. ~~attended~~ in cases connected with intestinal irritation. small doses of this composition often prove serviceable by allaying general irritability. and producing diaphoresis. in the Idiopathic form opiates of every description should be avoided. when the patient is convalescent. this ~~diet~~ should be lighter. as chicken water. sago. Tapioca. arrow root &c. with moderate exercise.

An
Inaugural Essay
on
Goitre
For the degree
of
Doctor of Medicine

Addressed
To
The Medical Faculty
of
The University of Maryland

By
Danl. of St. Thos. Jenifer

1837

Bronchocele or Goitre consists in a morbid enlargement of the thyroid gland; this gland is situated at the anterior part of the neck on the sides of the upper part of the trachea and pharynx. it is composed of a centre and two lateral portions. The centre or isthmus is situated cross-wise directly below the termination of the larynx; the lateral portions or horns extend from the lower horn of the thyroid cartilage to the sixth or seventh ring of the trachea. there also exists a third horn or pyramid of small size having a direction between the two great horns and inclining to one side.
The thyroid gland is of a firm and solid texture covered with a condensed cellular membrane. it is made up of lobules collected in to distinct lobes which are separated from each other by processes of fine cellular tissue between which its vessels pass: it is also supplied with nerves & lymphatics.
It has been a matter of dispute whether this gland is supplied with excretory ducts. This is a matter of some practical importance, as it might throw

some light upon the pathology of the disease to which this gland is subject. Small openings have been discovered on the internal surface of the trachea as described by Morgagni Bordeu and others. these openings are uniform in their number and situation and may be found "about the middle of the internal surface of the first cartilaginous ring of the trachea" that these openings have a communication with the thyroid gland I think is probable from the experiment of Fodere, who succeeded in inflating the gland to a considerable extent by blowing air through these openings from the trachea. Professor Gibson also succeeded in like manner in introducing quick silver into the cellular tissue of the lobes. and hence sanctioned the ingenious hypothesis for accounting for the immediate cause of Goitre by an obstruction of these trachio thyroidal passages of Bordeu. The plausibility of this hypothesis is borne out by the fact demonstrated by dissection that these passages are smaller in persons afflicted with Goitre than in healthy individuals. and that the diminution in their size is in pro-

portion to the duration and extent of the disease, and again, the fluid contained in the diseased gland much resembles that which is found to exist in it in its healthy state, but much more abundant in quantity. The foregoing theory will also account for the sudden appearance of the goitrous swelling occasioned by the violent exercise of the muscles of the neck in lifting heavy weights, and by the throes of parturition, explicable I believe on no other assigned cause. But there are other facts attending this disease which can not be explained by this view, and which seem to me to afford sufficient ground to reject it. For instance the disease is sometimes radically cured by the affected individual removing from the valley where the disease was contracted to the top of a neighbouring mountain. The endemic character of the disease is another objection, indeed as various as are the alleged causes of Goitre, and they are very numerous, for almost every writer on the subject has assigned a different cause, there is scarcely one that does not seem to be supported by one or more facts connected with the history of the disease, and not one that will account for them all.

Among the various causes assigned for Goitre may be mentioned drinking snow water or water impregnated with lime and other earthy substances. With reference to the fact that melted snow was the cause of the disease may have arisen from the circumstance of that substance existing in regions where Goitre was common, and as men are always anxious to assign a cause for every thing that comes under their observation. This solution was the most obvious. At all events the idea can not be correct for the disease is found in all its virulence in Sumatra and other places where snow never falls. Nor does the disease exist among the perpetual snows of Greenland and Lapland. With regard to lime water as a source of the disease it may be stated that Goitre is not known in numerous places where water abounding in calcareous impregnations is constantly drunk. Some have attributed it to unwholesome diet, filth, intemperance and all the concomitants of poverty, but were this the case our large cities would present Goitrous persons in great abundance. Others still have attributed it to newly settled dis-

Epidemic, and have attempted to substantiate the opinion by statistical details. The Late Professor Barton attributes the disease to marsh miasm, but then Goitre ought to exist on the shores of the Delaware & Chesapeake where as the disease is scarcely known in those localities. Dr Hunter supposes it to have some connection with the development of puberty in the female

Weighty reasons have been assigned by Fodere and others for attributing the origin of the disease to humidity & heat together with other debilitating predisposing causes, such as indolence intemperance and poverty. Indeed the arguments of the last-mentioned writer are particularly entitled to consideration from the circumstance of his having the most favourable opportunity of observing the disease, the labours he has bestowed upon an investigation of the causes that produce it, and from the fact that the circumstances enumerated by him as the probable causes of the disease have been always found to exist in regions where Goitre prevails. For if we turn

our attention to the history of Goitre we shall find that it almost universally prevails in the deep valleys situated in the midst of mountains, in the neighbourhood of lakes, ponds & rivulets and surrounded mostly by luxuriant vegetation. This circumstance wants reminds us of the opinion of Prof. Barton. Here the direct & reflected rays of the sun act with peculiar force upon the surface of the waters, giving rise to rapid evaporation and loading the air with moisture, while the surrounding mountains prevent the free circulation of air and favour the existence of almost insufferable heat. Such are the characteristic geographical conditions of the districts most abounding in Goitre. Among them we may mention the valleys of Maurienne, Savoy, and Radaig in Aun the valleys of the Alps, and Appenines; some portions of China Tartary & Sumatra and the greater part of the valleys situated at the base of the American mountains. That the cause of Goitre is a local one is pretty generally admitted, but what that cause is I am inclined to think has never yet been ascertained,

and it is probable so subtle is the agent that produces it that we may never be able to detect it.

With respect to its seat and symptoms it seems also to be circumscribed and local, without producing pain or other constitutional effects when it is of small size, and is only deserving of consideration on account of the deformity it occasions and its tendency to increase. Sometimes however it grows to a very large size weighing a pound and often more. It then becomes the subject of surgical notice producing constitutional irritation or else encumbrance by its weight or pressure upon the trachea and adjoining vessels and nerves and giving rise to distressing or dangerous symptoms and sometimes occasioning death. In connection with its constitutional effects this disease sometimes affects the mental faculties, thus giving rise to a supposed identity between it and cretinism. This idea is founded on the fact that Cretins and Goitrous subjects are found in the same localities and not unfrequently

residing in the same or adjoining houses, and that the intermarriage of such persons gives a hereditary origin to one or the other disease; but probably the analogy between the two diseases is not great. Goitre has also been confounded with Scrofula but the distinctions between the two are too characteristic to require notice.

With respect to the remedies resorted to for the cure of Goitre they are almost as various as are its supposed causes. Among the most prominent may be ranked burnt sponge, Mercury, Muriate of Barytes, Lime and Iron, Sulphuret of Potash, Belladonna, Cicuta, Electricity, Iodine, Incisions and all kinds of Counter irritants. When we consider the nature of this disease, that it consists in an enlargement of the Thyroid Gland, occasioned by irritation, inflammation, obstruction or some other cause acting locally, and that the disease is local in its character, we are led at once to the conclusion that the most of these remedies which were to act through the agency of the general system must have been inf

fectual, for most of them being merely Tonics they could have acted in no other way than through the general system, imparting to it strength and vigour but as the system generally is not affected in this disease, those remedies could have answered no salutary purpose in such cases, and could only have been serviceable in a debilitated state of the Constitution. Never the less cases have been reported which were cured by these remedies

The Treatment by Counter irritants with perhaps the exception of Iodine seems to have been much more effectual than other modes of Treatment. and seems to be much more in accordance with the known principles of medicine. Perpetual irritation kept up by means of blisters or setons have proved very effectual in curing the disease. indeed the latter practice seems to have been so successful in the hands of Quadri of Naples that he scarcely resorts to the use of any other remedy. Pressure kept up for a long time has been highly recommended by Dr Physic & others. Stimulating liniments and embrocations have been recommended by almost every modern writer and certainly

have proved very salutary. But of all the remedies resorted to for the cure of Goitre, none holds so justly high a rank as that which was introduced into practice by Coindet of Geneva. The Iodine, and the burnt sponge formerly so much resorted to Hoglum proved to have been valuable only on account of the Iodine it contained; so great has been the success attending the use of this medicine that it is now resorted to more frequently than all the others combined. The mode of its application is in the form of inunction conjoined with its internal administration in most cases. For my self I am inclined to think the Iodine applied externally by far the most useful of all remedies in the early stage of the disease provided there is nothing in the nature of the case to forbid its application. The Tincture of Iodine or the Hydriodate of Potash should be administered internally at the same time

But the most rational method of cure is not to depend upon any one remedy but to form a plan of treatment from general indications made known

by a careful examination of the particular case. If there exist a debilitated constitution attention must be turned to strengthening it. If there is inflammatory action general or local it must be reduced. If the constitution is in all respects good external applications alone may effect a cure, especially if the tumour is small and not of long standing. In this state Professor Gibson relies mainly upon the Extract of Cicuta. If the tumour is large and indolent a seton may be tried or electricity which has in some cases been attended with happy results: If there exist sacs containing fluid and thus constituting what is termed Hydrocele of the neck; for this in all probability is a species of Goitre; these must be punctured. Sometimes it happens that pus is formed and discharged spontaneously and a cure thus effected.

But it will sometimes happen that every remedy has failed, and no hope of relief to the suffering individual remains, but the doubtful remedy of the surgeon's knife

It has been recommended by some to attempt to cut off the nutrition of this organ by passing ligatures around its arteries, and cases are on record where this operation has proved successful, and where even practicable this should be resorted to in preference to extirpation. The extirpation of this gland indeed is attended with unusual difficulties owing to the sensitive region to be operated on, the immediate vicinity of important vessels and nerves, and the enormous size the gland and its arteries sometimes attain in the protracted stages of Goitre: When the life the operation has been performed successfully, and is in some few cases justifiable, though the event is in all cases doubtful. A case is recorded in which this operation was performed by Dupuytren with the loss of only a few spoonsful of blood but nevertheless the patient died in thirty hours of Prostration. A case resulting in a similar way is related by Professor Smith: the subject being operated upon by his own hands. Other cases have been recorded in which the operation was not conducted so hapily, the patients having lost their lives by hemorrhage

An Inaugural Dissertation
on
Sanguinaria Canadensis
Presented to the Medical
Faculty
of the
University of Maryland
for the
Degree of
Doctor Medicine

By
W. Durham Lyles
of
Monticello
South Carolina

1837

Sanguinaria Canadensis 1

"Experientia docet"

This plant is so common that it is known to every one from Canada to Louisiana under the vulgar appellation of Puccoon, Blood root &c.
It is one of our earliest spring plants making its appearance in So, Carolina where I am only intimate with its history, toward the last of February making its appearance first by sending up a small slender stem to the height of two three or four inches on which is surmounted a beautiful snow drop like flower, which seems to be nodding to the bleak objects that surround it as it is moved by every passing breeze.

The leaves are of a semi round shape though deeply notched around the edges, having large nervous filaments running through them.
I believe this is all the notice they deserve.

The root deserves more of our attention and I may here observe that it has been long and wilfully neglected by the generality of the medical profession though I need not complain of the neglect of this one article the product of our native soil. It has only shared the common fate of most native medicines of the vegetable class. but I hope soon to see the mania for foreign articles subside and then we may all rejoice for a new day will dawn upon the benighted pages of our vegetable Materia Medica —. The Root, when cleanly washed is of a bright vermillion hue; generally one end I may say always the upper extremity bent upon itself sending out many thread like filaments to collect a sustenance for the whole plant from the

surrounding soil, then terminating in a blunt extremity as if it had been broken and cicatrized.
When cut or broken in the green state a red, blood like fluid escapes in drops, but when suffered to evaporate to the consistence of honey, in the open air it becomes of an orange colour. It would be proper in this place were it at all necessary to give an analysis of the root, but as I have never analyzed it, and the limits of this paper forbids my giving that of others, as I could not give one without doing injustice to another. Therefore I shall now consider its medicinal virtues and therapeutic application.
The good effects of this agent and in fact whether it should be used at all or not have been the subject of warm

debate. Its qualities has been variously estimated by the different practitioners who have tryed it. Thus Doct Bird asserts with a little confidence that it possesses the same properties of cinchona Doct Barton with the same boldness gives it no other credit than as an Emetic. Doct Bigelow with becoming gravity positively asserts that it is an aero narcotic and Doct Tully winds up the whole by making it a remedy for every thing in nature. I shall not say that sanguinaria is not a remedy for every thing, but I shall not say that is by any means.
In justice to Doct Barton I must say that he come nearer the truth than any one of the above named speculators on the public fancy

As an emetic it is surely a valuable agent and its use may often be indicated when nothing else may happen to suit the patients particular predjudice. Though I would not be understood to say it may be employed inconsiderately under any circumstance. Taken in large doses* under ordinary circumstances, it opperates as a prompt and efficacious emetic without producing any of the head ache indistinctness of vision difficulty of respiration of spoken of with so much emphasis by Doct. Eberle. And I may here observe that it seldom fails to exercise a sedative influence on the force of the circulation and in this way becoming more valuable to the Therapeutist. As an emetic

* 10 to 20 grs of the powdered root

It is contra indicated where there is much Gastric or Hepatic irritation, or in fact in any of the highly inflamatory diseases of the Human body. But in Chronic inflamation of some parthans of it I am compelled to give it my hearty and warmest approbation, In Chronic inflamation of the Lungs it may be used withe peculiar advantages as a Nauseant, made into a syrup In hooping Cough it has been highly extolled. and in fact all the Pectoral diseases. In hepatic obstructions. I can not too forcibly urge its employment, where there is much torpor of the Liver it excites an immediate and healthy action. But it is of the most importance to us in the

Treatment of our autumnal fevers
I have used it this class of fevers
to a no very limited extent under
the eye ~~of~~ and guidance of my
respected preceptor —, and I can
say without deviating from the
sacred pathway of truth. I have
never been disapointed in its effects
more than is common to all the
agents we employ. I would more
particularly recomend it in the
forming stage of these fevers. and
when given judiciously and under
the proper circumstances. it will
invariably as far as the rule goes. exer-
cise a beneficial influence.
It has been highly spoken of in
Hydro Thorax but. I can say nothing
on this head from personal obser-
vation, as an Escharotic it has been
much praised but I must confess

I am skeptical on this point,
In Rheumatism, I believe has not been over-
-ated, and I think it entitled to the
trouble of a trial in this painful
affection. As an application in polypi
of the soft kind it is entitled to
much confidence. It has claims
to the attention of the profession
as a remedial agent in croup.
And now I must close the tale
of its virtues as connected with
its Emetic properties by recomm-
-ending it, as a remedial agent of no
little importance in Phthisis pulmonalis
I have known it tried with great
advantage it seemed to produce a
sedative effect after the disturbance
caused by its action which more than
repaid for its nauseating effects, though
in this disease it must forever rest its
claims to employment on its palliative

influences as must I fear every other remedy that will ever be proposed.

It may be successfully used as a Tonic in some degree, and I think it often may supercede many of the agents of this class now in use, it is true its Tonic powers are slow but they are generally diffused through out the system and by its long continued use may be of great service to the physician. I would here suggest its employment in Chronic Dyspepsia in small doses say begin with 1gr three times a day and gradually increase to four.

As a diuretic it seems to have many claims to our notice. I can not here divine its Modus Operandi but I am sure that it does possess this property

in a very great degree when properly prepared, by infusing ℥j of the bruised root in a pint and a half of water and giving a desert spoon full thre times per day to this may be added sugar to make it palatable, in this form I have seen it produce the most happy effects, in cases of partial dysuria and in one or two cases of Gonorrhea where diuretics were indicated. And according to the experience of some may be used in Nephritic Complaints generally.

It has been spoken of as an anthelmintic but whether or not it possess this property I am not able to say from experience.

I might now

go on to tell of its many virtues or of the many virtues ascribed to it ~~by many~~. But this would be superfluous as I think if we seek for a single agent to fulfil all our views we will be sadly disappointed.

I must here leave it, for its claims and mine to rest on future investigation.

An inaugural dissertation
on Canine Madness
submitted to the consideration
of the Provost, Trustees, & Medical Faculty
of the University of Maryland
for the degree of Doctor of Medicine
by James Jackson Cockrill
of Baltimore

1837

To Nathaniel Potter, Professor of the Practice of Medicine, in the University of Maryland, this dissertation, on Canine Madness, is dedicated:— as his talent and ability, to fill the situation he now occupies, and his kindness and willingness, as a gentleman and teacher, to instruct, loudly call for the warmest feelings of regard, from the

Author.

Canine Madness (Rabies Canina)

Upon the examination of all authors who have written upon this subject, we generally find the term, hydrophobia, made use of to designate this form of disease. I ask, if we, in this enlightened day, shall, as our predecessors have done, cling with such firmness to a symptom which only forms a link in the chain of the disease, instead of constituting the disease proper. Canine madness is a disease produced by the bite of certain classes of animals, which have been denominated canine; such as, the dog, Wolf, and fox.

The disease is one which was known before the time of Celsus, who lived during the reign of Augustus, both of whom if we can place any dependance in history, existed about the time of Christ; and from that time to the present, has never been known to occur spontaneously, except in the classes of animals above alluded to; and from them communicated to man, and all other animals exposed to their ravages. The specific poison, or virus, has evidently been proven to belong

to the saliva; and, moreover, that no other secretion ex-
-cretion or animal fluid is capable of producing the
disease independently of the saliva.

Should we look for the
effects of this poison to be developed by inoculation?-
it appears evident from previous observation, that the
specific poison of the rabid animal must necessa-
-rily come into contact with the blood, and be taken
up by that fluid to be communicated throughout
the system before any of the effects of that poison
can be produced. It, therefore, matters not, wheth-
-er the poison be communicated by the bite of
the animal, or by artificial means, the effect is
the same. It consequently follows, that persons
should be very particular when attending upon
those who may be labouring under the influence
of the disease, or when handling animals that
have fallen victims to the same, that their
hands and surface generally, should be perfectly
free from wounds. For if, by accident, they should
collect a small portion of the poison on their

hands or surface the virus would be absorbed if a wound existed upon the spot that the saliva came in contact with. There are many circumstances to be born in mind when speaking upon the absorption of canine poison; that is, the modifying agents which attend the bite of rabid animals, if it were not for this fact we should have inevitably to expect the development of canine madness in all those whose misfortune it has been to become exposed to this most terrible of all dreaded poisons. It has been most positively asserted, that not more than one in ten persons go mad, after being bitten by animals affected with this disease. Be this as it may, observation and experience prove nearly every case of the kind to have gone mad especially when bitten upon naked surfaces; and the reason why a number of persons escape, is because they were bitten through parts of their garment, the effect of which was, to wipe the poison from off the animals teeth and thereby prevent the insertion of the virus: or from profuse

hemmorhage from the part, which had the effect of cleansing the wound of the matter which had been lodged there by the teeth of the animal.

Canine madness is a disease confined more particularly to temperate, although it has been observed in cold and warm latitudes. Doctor Potter in his lecture on this most formidable disease, has said "that it is more apt to occur in summer after after a cool spell of weather." There can be no definite period upon which we may calculate to have the symptoms of Canine madness made evident, as scarcely any two authors, who have written upon this subject, agree as to the precise time of their occurrence. As this form of poison appears to observe no kind of law in its effects on the animal economy, of course it must naturally follow, that the precise time at which we shall have the effects produced, must vary in regard to the latent period which exists between the time of the insertion of the poison and that at which we have the symptoms made

manifest. Difference of opinion seems to exist as to
what time we have the symptoms of the disease pro-
-duced after the infliction of the bite of the animal.
The medium time however appears to be about six
weeks; although the disease has been known to oc-
-cur sometimes sooner and at others later and
have by many been said to take place even
after the lapse of ten, twenty, and thirty years,
this, however must require considerable stretch
of imagination to be credited. Be the discrepencies
on this point what they may, I believe it is now
generally concurred in that from three to nine
weeks from the time the individual recieves the
introduction of the canine virus to the period at
which the disease developes itself. The disease have
been, by some, believed to be generated by various
kinds of animals; some have enumerated one
kind, some another; but, we have sufficient proof,
if we credit some of our most worthy writers
upon this subject, that none other than those that
have been already mentioned above, are capable

of generating this most horrible disease. The question might be asked, why not the classes of animals peculiar to the canine race be subject to a disease peculiar to themselves, that is a disease sui generis, a disease that cannot be generated by any other class of animals. We have the same right to look for this form of disease in them as we have to see certain forms of disease developed in other animals peculiar to them, of which, it is almost useless to say, we have numerous instances in the annals of the science. The virus has been said to have retained its power of affecting the system some considerable time after its generation: this may be the case, for one might be led to suppose, that a poison producing such violent effects could, even after being subject to age, still retain the property of giving rise to the disease in its true form. We have this exemplified in other of the animal poisons, and might we ask why not in this.

Certain atmospheric constitutions appear to favour the spontaneous generation of this disease. It would be a useless waste of time to enquire into the nature of the atmosphere which gives rise to the spontaneous generation of canine madness; for in this like all other effects that we may look for certain atmospheric constitutions as being concerned in, we must ever remain in ignorance, except chemistry at some remote period shall reveal to man the hidden, and now unknown secrets of nature. We can with astonishment view effects but the precise nature of the causes of such effects remain unknown.

It has been said the disease is produced in consequence of the cessation of perspiration; if this notion be true we should be very apt to see canine madness existing in all its fury every day. For certain it is, that like all animals, especially man, dogs must become subject to disease in all its

various forms and modifications. It would, therefore, follow, that whenever from disease or otherwise, dogs became so affected as not to be able to perform the functions of perspiration, or diaphoresis, that from that time the animal must be considered mad. I repeat then, if that be the case, we should see canine madness daily; which is not the case.

We may also mention, among other causes that have been assigned, as being sufficient to produce the disease that of putrid animal matter. This is all a farce, for what becomes of all the dead animals that are drawn out upon the old fields? This is a question that can be very easily answered. There is no class of animals, probably, that can smell those carcasses sooner or at a greater distance than dogs. These animals resort to such feasts from all quarters, and fare largely upon these dead and putrid animals; and yet we never see canine madness brought about

by this cause. If this were a cause we should soon begin to look for the extermination of the canine race. With regard to food and drink, why is it not that all starved dogs are not running mad, or will the originator of this assertion pretend to say, that those animals never feel what want is. This cannot be said. Also these animals have been known to perish for want of both, and still their death was not produced by rabies. Among other causes mentioned, that of a worm ~~placed~~ situated under the tongue was once supposed to constitute a link in the chain of causes; this opinion has long since been laid in the dust, with many others that have preceded it; only waiting for some others of the once promulgated facts of the science to accompany it.

After examining into the nature and causes of the disease, it can be very evidently seen, from all that has been said of canine madness, that there are many points in regard to which we will be compelled to admit that the profession must ever remain in ignorance

of, unless future experience shall as has been done on other subjects, bring forth the precise nature of the disease, stripped of the mysteries in which it is now enveloped. This is a disease, the symptoms of which are well calculated to excite the feelings and sympathies of the bystander, producing sensations which will not be forgotten while life exists. There are many symptomatic affections which might be mistaken for canine madness, in consequence of the symptoms closely similating those of that disease.

It is the lot of almost every practitioner, during his professional career to meet with those by whom, when attempts have been made to take fluids of any kind, spasms and other unpleasant symptoms have been produced. Yet, if he be one whose knowledge of the science of medicine be but ordinary certainly would not, without making proper examination, pronounce the case to be one of canine madness; because, the records of the science furnish ample proof of the similation

of other forms of disease to that of rabies. Inflamation of certain organs of the animal economy has generated symptoms closely allied to those produced by the action of canine virus. For some of these we may refer to inflamation of the brain; next in order would follow those of nervous origin, such as Hysteria, hypochondriasis, and a host of others which might be enumerated. The effects of certain narcotic poisons have, beyond all doubt generated symptoms that might at first sight have impressed one with the idea that they were the consequence of the action of canine virus: but an examination into the nature and causes of the symptoms, would frequently place all doubts on this subject at rest.

Other forms of disease have often been mistaken for canine madness, and upon examination we find, that this has been a stumbling block over which so many have fallen when writing upon this subject, especially when describing the sympathetic

effects of other causes, instead of canine virus. The symptoms which have been produced by scratching particular parts of the body, and those which have been caused by tetanus, have all at different times been confounded with rabies. Our most illustrious Doctor Rush, a name that must ever reflect credit upon his country, the age in which he lived, and the profession that he was of, has fallen into error by endeavouring to prove tetanus and canine madness as being diseases purely identical. For when we come to speak of the symptoms of the disease, we shall endeavour to point out those more peculiar to rabies, which will be found to differ from those of tetanus. There are certain forms of inflamatory affections of the throat and the muscles concerned in the act of deglutition that have brought about symptoms spasmodic in their character, and which have produced in the minds of many, that the disease was one of canine origin, because the patient was unable

to take fluids without causing symptoms which were somewhat unpleasant in their character.

It certainly is very evident from the numerous instances that have been already mentioned, of other diseases generating symptoms, bearing in their character, appearances so closely similating canine madness, that it has been the cause, probably, of some of the many recorded instances we have had of this most terrific malady.

Symptoms.— Persons after being exposed to the action of the virus for several weeks have been known to be differently affected, while one will complain of slight indisposition and want of energy, another will appear to suffer ~~to suffer~~ from considerable excitement. Sometimes we have the local, as well as the general symptoms made manifest some-time previous to the disease appearing in its true character.

We have not the local symptoms

declaring themselves in such violence as to be calculated to direct the attention of the medical attendant to the source or cause of the disease: Indeed, very often, we find this to be quite the reverse: for in many instances we have all the symptoms of canine madness existing, and yet the parts that have been bitten remain perfectly cicatrized. In many instances however, we have the local symptoms developed. The wound taking upon itself the character of an open sore, from which we have discharged a matter thin, and sometimes offensive in its qualities. While many complain of severe pain in the part, following generally the course of the member upon which they were bit, and from thence conveyed to the most remote parts of the body, particularly the throat, producing sensations which the patient regards as mere dryness. Canine madness, however, should not be looked upon as being a disease the symptoms of which are enshrouded in as much mystery

as some have asserted; for, generally, by the time the physician is in the room, with the patient fifteen minutes, the history of the case and every circum-stance that has any bearing upon it will be clearly revealed. Cases of this kind occur frequently, when the symptoms present might be looked upon as being purely inflamatory and partaking much of the nature of synochal fever. Indeed we have one very respectable author on this subject, Doctor Potter, who views the disease as being one of malignant fever.

I recollect twelve or eight-teen months back visiting a case of this kind with my preceptor, when entering the room, I was somewhat surprised to find the patient sitting upon a chair in one of the lower rooms of the house apparently well, with the excep-tion of inflamed eyes and flushed face; his first question was to know, of us, whether or not we thought him to be mad. Nor, indeed, was I satisfied with respect to the true character.

of the disease until several fluids were offered, and a considerable number of ineffectual efforts to swallow were made by him. This, with other symp-toms, and the history of the case, clearly proved it to be one of canine origin.

We have the occurrence of nearly all the symptoms of fever in the forming stage of the disease; indisposition to corporeal and mental exertion, flushed face, inflamed eyes, thirst, and pains in certain parts of the body, an indescribable anxiousness of countenance is always to be observed as if they supposed some destroying agent awaited them; will desire the door to be shut if opened, so as to admit the air to be directed upon them. In the first offset of the disease the patient feels very little disposition to sleep, or if thus affected, merely slumbers, or his sleep appears interrupted with a kind of low mut-tering that cannot be understood. We find them very often loquacious during their sleep,

and affected with partial spasms, nervous twitchings, and tormented with the most horrible dreams, which occasions them to wake often, in consequence of which some will say they are afraid to go to sleep. Thus the symptoms of the disease will continue for twentyfour or thirty hours, when we find the patient very often becoming pale in his expression of countenance, bearing a somewhat haggard appearance, although, at times, ferocious, but appears, when not not ferocious, constantly melancholy. In nearly every case there is considerable repugnance to drinks of any kind particularly water. I say particularly water, because I have seen persons labouring under this disease, when molasses or coffee could be taken when water could not: but in the latter stage of the disease, when cough attends, and the discharge of the saliva becomes thick and profuse, we generally find them opposed to taking fluids of any kind, even their medicines. In reference to the case that occurred in Richmond, (Va.), in eighteen hundred and

eighteen, as has been related by Doctor Trent and afterwards written on so extensively by Doctor Mease evidently prove persons have been known to be afflicted with the disease and be able to swallow liquids to the last.

Fluids are not the only agents that appear to molest those whose misfortune it has been to become afflicted with rabies, for very often we find other sources than those that have already been assigned as giving rise to the symptoms characteristic of this disease. Sounds, emanating from certain substances, the reflection from polished surfaces, or any circumstance that is calculated to act upon the mind in a sudden and unexpected manner, will give rise to the symptoms after the disease has been once developed. Thirst seems to be one of the constant attendants, and although there is an inability to swallow yet the patient will very often ask for something to drink: the attempt most always accompanied by convulsions, particularly in the arms, and muscles concerned

in the office of respiration and deglutition, generating symptoms of suffocation and general alarm. There is an inability in the latter stage of the disease to swallow the saliva that is so profusely secreted, it is therefore continually calling upon the patient to spit it out. It at last becomes thick and ropy, so much so, that the individual is scarcely able to void the mouth of its contents. Generally about this time persons will be found during the re-missions that occur between the paroxysms, to have a knowledge of persons and things around them and seem to speak rationally, imploring all those who may be in the room to leave it for fear they may, in one of their paroxysms, commit some violence upon them that they may be sorry for afterwards. They will also, at times, tell those who may be present that they know what they are doing in the paroxysm but the disposition to commit the act is so strong that they have no power of controlling themselves whatever. About this period also we find patients affected with

a peculiar sound of the voice and cough similating croup which has given rise to the popular notion that persons thus affected, have been known to bark like dogs. It is generally beleived, that dogs will not when mad deviate either to the right or left to intermpt persons, but continue on in a uniform pace, and that those animals when mad will not take to or have any communication with water. The first of these opinions of course is not infallible, and the second entirely false; for those animals have been known to swim over large creeks and rivers when closely pursued by persons for the purpose of shooting them. These animals show considerable disposition, to ramble from home, in the latter stage of the disease, travel-ing great distances, inoculating as they run every animal that comes in their way.

The paroxysms that occur during the period of this disease usually pass off, after a course of from ten to twenty minutes, and the pa-tients mind appears to be left quite tranquil.

The prognosis of this disease is one which does not require any considerable tax of the memory, as all who have been seized with the disease have died between the second and fifth day, although the majority of deaths take place on the third.

Post Mortem appearances. — Have dissections, so far as our knowledge and memory serve us, thrown any light on this subject? We shall see with what success they have been attended, after taking a somewhat cursory view of the recorded cases. We find it to be asserted that decomposition takes place very rapidly after death. If this be the case, we can readily imagine that changes must be produced upon the animal solids, which it would be very difficult to determine whether produced before or after death. This has proved to be one of the principle obstacles that has stood as a barrier in the way of the pathologist, preventing him from pronouncing with certainty upon the precise nature and pathology of the disease, even after making the necessary examinations.

In consequence of this disease taking upon itself the form of a nervous, and that of an inflamatory affection, of course we might look to the brain and other organs of the animal economy for changes produced in their structure.

This like many other diseases cannot be referred to any particular portion of the brain, for post mortem examinations have very clearly proved, that many alterations and appearances in this organ are to be observed in different cases of this disease. That is, there are scarcely any two cases, that have been examined after death, that were found to ~~profess~~ present the same kind of disorganizations and derangements in the proper texture or coverings of this the great organ of the sensorium. Sometimes we find extravasations of a fluid between the meninges or coverings of this organ, at others, we see it made manifest in the ventricles. Morgagni mentions this disease to be accompanied with a softened condition of the brain, while others

presented appearances quite the reverse. If we examine other organs of the body after death there will be found the same discrepancies to exist in regard to them as have been in that of that of the brain. The appearances of nearly all the mucous membranes after death, have proven that they were in a state of congestion or inflamation previous to the death of the individual. The inflamation of the lining membrane of the mouth, fauces, stomach and bowels have been found to be present after death. Evident marks of inflamation have been detected in the abdominal viscera, those organs also that have their location in the chest, and those of the urinary aparatus have, among the rest been found to be concerned. There are probably scarcely any of the important organs of the body that escape from being affected in some way by the powerful effects which canine virus produces on the system. It might appear from what has already been said concerning the nature of the

wounds that have been produced upon different parts of the body, that we should expect to find the nerve proceeding from the part to be in a state of inflamation. This fact has been observed by more than one. But we have again, the records, on the other hand, of the science, informing us, that the most strict and rigid examinations have been institutated, without detecting in the body the slightest appearance of disorganization or disease.

Hence arise the numerous discrepencies upon the nature, and Pathology of and treatment of this disease. The question might be agitated, whether the Pathology of this disease depends upon a primary affection of the sanguineous or nervous Systems. That is, are we to look upon this disease as being one purely inflamatory, or are we to expect to find it depending upon some imitation situated in the brain or nervous system? Indeed, this is a subject that would involve a vast

deal of time research and labour, and even, when properly discussed, would leave us as much in the dark and ignorance as when the task was commenced. We should, therefore, content ourselves with the observation of facts and if the records of the science is not sufficient to afford them, we certainly would be doing injustice to the subject, and to the world by stating assumed, for established and demonstrated facts, an error which has overdone the science such injustice, by teaching the advocates of her cause to take for granted the many false facts if so they may be called because they were the productions of men of high authority. Mental agitation, convulsions, a dread of liquids, and many other symptoms that occur, certainly are the effects of some ~~xxxx~~ ~~xxx~~ deranged or morbid condition of the brain and nervous system. But who, among the candid of the profession, would pretend to decide whether they were the effects of some primary impression or irritation inflicted upon

this organ, and the nerves or effects that were purely secondarily produced by the modifying action of the blood upon the brain and nervous system.

The symptoms to be observed in canine madness, so far as we can learn are by no means uniform in their violence in different cases; while some cases appear to put on all the symptoms of an inflamatory affection others are well marked as constituting the disease more feeble in its action. Were we to judge from the analogy of the action of other poisons on the animal economy, we should be constrained to admit that these varied effects may depend upon the action of the remote cause. If we look to the effects of marsh effluvia or malaria upon the system, it will be seen that this poison will in one produce fever in its most violent form, and in another, will affect the system so powerfully as to overcome all nervous excitability, and the consequent death of the individual

Treatment. — It can be very readily understood, after having said so much on the nature of rabies, that the pathology of the disease must be one enveloped in considerable obscurity, in consequence of which the treatment must be somewhat empyrical and hazardous. Should we, because the disease appears to be one enshrouded in such mystery, content ourselves by saying that for rabies there is no plan of treatment applicable; certainly not: although our hopes of success are not at this time built upon ~~the~~ data any positive data; yet, we hope to live to see the almost insurmountable obstacle gotten over by the profession. If we admit that there have been no cases of this disease cured we would be discrediting the authority of several Physicians of high standing, and whose names will ever be looked upon as ornaments to the profession. Among those to whom we have alluded, are the names of Doctors Rush and Potter. We consider it, however, due the subject upon which we are now writing to admit the cases thus referred to, to be but few.

In as much as the disease is one which experience has proved to yield, but seldom, to immediate treatment, some plan of prevention would seem to present itself. What course then would appear to be applicable in the prevention of rabies? The first of the prophylactic measures which would seem to be indicated is, that of excision, if the bite be inflicted, upon parts of the body that will admit of the operation: if this be impracticable from the location of the injury the next remedies that would suggest themselves would be the actual and potential cautery. For certain it is, that these last mentioned measures could be made use of when from the location of the injured part, the other would be contra indicated. It appears to be a rational deduction, that the benefits arising from the use of the most or all of the prophylactic measures would seem to depend upon more early applications of the remedies. "For if time be allowed to pass until the poison be taken up by the blood, and conveyed into the general parent

of the circulation what benefit would be derived from the use of all the prophylactic measures to which the profession generally resort. As to the benefits that we might expect to accrue from a continual steam of water upon the wound we should think would be very doubtful, if not to favour the more rapid absorption of the virus.

Among many of the remedies made use of for the prevention of rabies are those of mercurial ointment, cupping glasses and the application of the ligature. The two last of these should be looked upon as constituting remedies that appear to offer but a slight obstacle to the passage of the poison in its course into the circulation. For, so soon as these applications have been removed, if the poison had gained the circulation as far as the part constricted by the ligature or glass, we would find, from that instant the poison traveling on to gain the larger vessels. And as to the first, the mercurial ointment little if any thing can be said in its favour.

It would be as well here to mention some of the principal caustics that are generally used in the treatment of those wounds, for such, we may look upon caustic potash, nitrate of silver, an ointment made of the white oxide of arsenic, burnt alum, and indeed all those substances that come under that class have been used for this purpose. But the caustic alkali and arsenic must certainly be considered the best. It should be borne in mind that, when making application of these remedies, it is a consideration to bring them into contact with as great an extent of surface as the wound will present.

The internal use of mercury has been recommended as a prophylactic for rabies. This measure being pushed to salivation, by Doctor Potter, and his father, have been supposed to be an almost infallable remedy. Doctor Potter in his lectures cites numerous instances to prove this fact; cases so plain in their character as scarcely to leave the least room for doubt upon

this subject. We have also the authority of other respectable writers who concur in establishing this fact. But it must be acknowledged, that this, like many other of the prophylactic means made use of, has had its advocates and opponents. The whole train of vegetable nostrums have had their day, and have, at last sunk into oblivion, from which they will, probably, never rise. And who, at this advanced period of the science we would ask, could place themselves so much upon a level with the superstitious and empyric, as to boast of the infallible prophylactic virtues of the scutellaria, alisma plantago, and a host of others, many of which, particularly scutellaria, have been proven to be perfectly inert. There is another that has been ~~used~~ viewed as possessing some peculiar power as a preventive in the disease, which is the Chinese snake stone. To believe in this would require us to call in the aid of empyricism and charlatanry. Lichens cinereus, anagalis arvensis, belladona, and cantharides

have all, at different times been spoken of as being used as prophylactics in this disease. The last named remedy has been used by Axter, a German surgeon of great celebrity, with the most implicit confidence "for if says Axter this substance in combination with tartar emetic be given in one grain doses daily for six days in succession and the wound be kept freely opened by the cantharides for five or six weeks the disease will be found but seldom to occur." Cold bathing is recommended by some of the old writers as being a powerful prophylactic in this affection, and its effects appear to be accounted for upon the invigorating and alterative influence it has upon the system generally, it may, at least they say, be used as an auxilliary to other plans of treatment made use of as preventive means.

It may be seen that opposite opinions are expressed by many eminent writers upon the use of prophylactic measures

made use of in cases of this disease. Besides the many remedies that have already been made use of, there is scarcely a nostrum or preparation of any kind but what has had its day and place, and, at last, have fallen into disrepute as cumberers of the ground.

We hear Doctor Eberle in speaking, upon canine madness informing us that the all important reliance to be placed in the external means of prevention, and as a subscriber to the measure, we have Doctor Gregory declaring that prevention, and not cure, must be the object of the practitioner. While Doctor James Mease has published, in one of the American medical recorders, numerous cases to proscribe the use of caustics entirely. The Doctor cites cases sufficient, if we could reconcile our minds with the belief, that these remedies have been made use of under all circumstances, and in the most harsh manner, without the least sign of benefit to have occured from their use. Certain it is, that when the

sentiments of men differ in regard to the prophylactic means, that they also differ in regard to the proper mode of treatment.

After considering the external and internal remediate treatment for the prevention of rabies, the next step that we should take would bring us to the consideration of the means of cure made use of after the disease has shown itself to be properly developed. The cold plunging bath is recommended by Van Swieten as a means used in arresting the progress of the disease; and Morgagni mentions the successful application of the remedy in his time although he admits the fact of one case of a poor patient who died instantaneously while in the act of being plunged into the cold bath. The case of a patient suffering from canine madness near the precincts of the city of Baltimore in the year eighteen hundred and thirty four, was bled to the amount of three pints besides the administration of fifteen grains of calomel and other purgative medicines, was

immersed in a warm bath, which produced such violent rage and convulsions upon the patient as to require the aid of several present to assist in confining him for several minutes to the bath.

"From what has followed from the administration of both the cold & warm baths these remedies appear to affect but little: besides when the dread of water is known to produce feelings of the most intense agony can we wonder at any individual afflicted with rabies who is thus dealt with to endeavour to frustrate the attempts of those who may concerned in confining them to an element to which they may be so much opposed." Cantharides has proved a cure for rabies even after the characteristic symptoms have presented themselves says Ateer El Bust." The first of these named gentlemen affirms, that cantharides may not only be looked upon as a preventive, but, also, as the means of cure; that several cases have occurred, in his practice, which were all subjected to

the administration of this remedy.

Both the internal and external use of sweet oil has been recommended worthy of trial, as frictions with warm oil is considered to be an efficient remedy by Celcus & Aelianus. Large doses of spirits of turpentine have been resorted to, but probably with little success. Acetate of lead, like many others has failed to cure canine madness; although the case that was treated in the city of Baltimore by Doctor Potter, & another physician, evidently appeared to improve under the employment of the remedy; nevertheless, the patient died on the third day, sometime previous to which he refused to take his medicines.

It would seem from the concurrence of medical authority, on the subject of the treatment, that free and copious blood letting has a more decided impression on the system in averting rabies than any other measure confided in. Doctors Rush and Potter

strongly advocate the use of bloodletting even to deliquium, and enumerate cases to prove that if this means be carried sufficiently far will produce its desired effects; with some of those spoken of, is that of an individual, by chance wounding the temporal artery from which blood continued to be discharged, until the person was found in an almost senseless condition, who, afterwards, recovered without having been subsequently affected with the disease.

The observations of Dupuytren, Magendie, Marshal, Rudt, and others go very far on the other hand to prove that cases have been met with in which the remedy made no impression on the disease. Doctor Russel mentions the case of a young lady labouring under rabies in whom a vein was opened and the blood allowed to flow until the state of syncope occurred, with the effect of arresting the disease.

Bloodletting, and calomel given in large quantities, such as to act the part of a brisk cathartic, have, by many, sup-

-posed to effect considerable benefit in cases of canine madness. In Doctor Tymon's case, blood was freely drawn and large quantities of laudanum administered both by the mouth and in the form of an enemata every two hours, on the following day calomel and opium were given every two hours, and persisted in until the sixth day, when salivation with a gradual subsidence of the disease occurred. It happened very fortunate for Doctor Tymon, that his patient survived the third day for if this like nearly all the cases that have occurred, had terminated on the third day, he would not have had an opportunity to have tested the above plan of treatment. Salivation might probably have some influence in checking this disease, but the most direct and expeditious plan of producing it, is, by the bi chloride of mercury, given in the dose of one eight of a grain every two or three hours.

If then we are to expect benefit to be derived from any plan of treatment bloodletting,

and mercury appear as far as we have examined to be the remedies generally confided in for that purpose; but certain it is from the numerous cases and plans of treatment laid down by different authors that the disease seldom if ever yields to this or any other plan of treatment.

An

Inaugural Dissertation

on

Indigestion

by

Thomas G. Booth

addressed to the

Trustees and Faculty

of the

University of Maryland

for the degree of

Doctor of Medicine.

Anno Domini 1837.

To my

Preceptors

Doct. P. Booth

and the

Professors

in the

University of Maryland

this is respectfully inscribed.

Indigestion.

Indigestion occurs, perhaps, more frequently than any other disease. It is met with in every country, in every class of society, in every season of the year. Devoid of the danger which attends other diseases, it is nevertheless equally distressing to the patient, poisoning all the sources of his enjoyment, and leading, in many instances to confirmed hypochondriasis. The habitual dyspeptic is indeed truly miserable. His sallow and anxious countenance, his irritable and sullen taciturnity, his aversion to social enjoyments, and the occasional overwhelming despondency of his mind, show him to be the prey of deep and harassing sufferings, of which none but those who have experienced them can form an adequate idea.

The stomach being one of the great centres of the system, its functions are more or less disturbed in every disorder to which the human body is subject; hence the difficulty of giving a very precise definition of indigestion or dyspepsia. The term, however, may be limited to those cases, in which, the functions of the stomach are impaired, without the presence of acute inflammation in the mucous membrane of the organ itself, of well-marked general fever, or of any very obvious disease in a distant part.

The symptoms of dyspepsia differ considerably according to the stage of the complaint, or the degree and extent of the irritation. In the commencement the patient is troubled with flatulency, distention, acid eructations, and colic; the appetite is variable, generally weak, but sometimes morbidly craving - if he indulges freely in taking food, he becomes oppressed, and generally suffers from pain some hours after; the tongue is covered with a white fur, the bowels usually constipated;

the mind is, at times, depressed and languid; the whole system languid, particularly during the process of digestion; and there is almost constantly a painful sensation in the epigastrium. After the disease has continued for sometime, or has been aggravated by some unusual irritating cause applied to the stomach, the pulse becomes tense and quick; the epigastrium tender to the touch; the mind irritable, discontented, and gloomy. The colic pains, sometime after taking food, are more frequent and severe; the bowels become irregular — being sometimes constipated; at others, affected with diarrhœa, during which portions of food are occasionally passed off in an imperfectly digested state — the stools varying in colour, consistence, and character. The whole system suffers in a degree corresponding to the violence of the symptoms. The body begins to waste, and the strength to fail; the dyspeptic sickness becomes severe and constant, the countenance assumes a

haggard and sallow aspect, the patient complains of more or less difficulty of lying on the left side, the skin becomes dry and shrivelled, and there is usually a morbid sensibility to low temperature.

From the extensive sympathies which subsist between the stomach and every other part of the living body, dyspeptics are frequently much harassed by painful and other affections in parts situated remotely from the stomach. Among these sympathetic affections of indigestion, headache is the most annoying and by far the most common. There are two sorts of dyspeptic headache noticed by authors, the one occurring while digestion is going on slowly and imperfectly in the stomach, and the other after the chyme has passed into the duodenum. The former, is said to be distinguished, by a languid and feeble pulse, a slightly coated and whitish tongue, with very pale red edges, mistiness before the eyes, slight

vertigo, and an apprehension of falling; slight nausea and uneasiness in the stomach; a sense of constriction about the fauces; and sometimes a coldness and numbness of the fingers; and generally a feeling of weight in the brain. The second, or as it has been called, anomalous dyspeptic headache, is characterized by brilliant occular spectra which constantly distress the patient, by the chilliness of the body, and the coldness and dampness of the hands and feet. The pain in the head is very severe, and is attended with a sensation of coldness and tension of the scalp, and a sense of weight and distention in the eyeballs. The pulse is natural in frequency, but always languid.

To form a just idea of the connexion of these various symptoms, — to illustrate the modes in which the several exciting causes of the disease, hereafter to be mentioned, operate, and to suggest the indications

to be kept in view in the treatment, it is necessary to advert to some of the most important circumstances in relation to the function of digestion. In reference to which, three important stages, or the part performed by these different portions of the alimentary canal, will be briefly considered:

The first change that the food experiences, is that which is effected in the mouth, constituting oral digestion. The changes effected upon the food in the mouth, are important preliminaries to the function which has to be executed in the stomach and small intestine. Both mastication and insalivation, in regard to solid food, are of great moment, in order that digestion shall be accomplished in perfection; hence a very common cause of indigestion is too rapid eating. Physiologists differ in regard to the agency of the saliva in digestion; some suppose that the admixture of it with the food communicates to it the fluid

degree of animalization, and others confine its use, simply, to giving the aliment the necessary degree of consistence, in order that the stomach and small intestine may exert their action upon it, in the most favourable manner. It is very probable, however, from some experiments that have been made on this subject that it has some solvent powers.

The second step to be considered, in the process of digestion, is the change which is effected in the stomach, or chymification. The food having been conveyed, by the proper channel, to the stomach, is there retained for several hours, and undergoes the first portion of the true digestive process, being converted into chyme. The portion of the aliment, in contact with the mucous membrane of the stomach, is that which is first changed, after which, by an alternate contraction and relaxation of the muscular fibres, an oscillatory or vermicular

motion is communicated to the organ, which exposes fresh portions continually to the action of the gastric juice, and converts that which has been acted on by that fluid into the pyloric portion of the organ. The pylorus having been previously closed by its valve, now opens to admit a free passage to the chyme into the small intestine, where a further change is effected, by which chyme is converted into a substance, whence chyle can be extracted, by the action of the chyliferous vessels or lacteals. This, according to the division we adopted, constitutes the third step in digestion.

Indigestion may depend upon two distinct morbid conditions of the digestive organs: namely, 1. On functional debility of the stomach from deficient or vitiated secretion of the gastric juice and muscular inactivity, independent of vascular irritation or inflammation.

2. On deficient or vitiated secretion of the gastric juice,

with vascular irritation or chronic inflammation of the mucous membrane of the stomach and duodenum, and a morbidly increased peristaltic action of these organs. The characteristic symptoms of the former pathological state, are, want of appetite; tongue covered with white fur; absence of epigastric tenderness, except after a paroxism of colic from flatulent distention; absence of constant tension and febrile irritation of the pulse; costiveness; acid and fœtid eructations; and the ability of bearing lean and tender animal food better than vegetable and farinaceous articles of diet.

Among the symptoms which characterise the latter or inflammatory grade of the disease, may be mentioned, tenderness to pressure of the epigastrium, and particularly about the region of the pylorus and duodenum; a firm, tense, small, and somewhat accelerated pulse, with slight manifestations of febrile exacerbations

towards evening; a red, chapped, or granulated appearance of the tongue; emaciation; irregular action of the bowels, — constipation alternating with frequent attacks of mucous, bilious, or watery diarrhœa; violent and protracted pain in the lower part of the epigastrium during the process of digestion; fulness about the region of the false ribs on the right side; an anxious and discontented expression of the countenance; and an inability without great suffering, to endure animal food and stimulants. From the tenderness to pressure, and the distention in the region of the pylorus and duodenum, in such cases, it is probable that the irritation or chronic inflammation is seated in the mucous membrane of the pyloric extremity of the stomach and of the duodenum, connected usually with a congested state of the liver, and often with fecal accumulations in the colon. These circumstances, together with the tense and quick pulse, furnishes the most

certain diagnosis of the existence of high mucous irritation or chronic inflammation in dyspeptic complaints.

In some instances, the pain and tenderness extends from the epigastrium into the left side, and becomes fixed in the region of the spleen. These symptoms may be owing to the existence of inflammation and congestion in the spleen — in which case this viscus is generally found in an enlarged condition — or an enlargement of the left lobe of the liver, or it may be owing to the extention of the chronic inflammation from the pylorus to the other parts of the stomach.

Causes of indigestion. From what has been said of the mode in which digestion is effected, it is obvious, that the immediate cause of indigestion, consists, in a deficient or vitiated secretion of the gastric juice, and in deficient or irregular action of the muscular coat of the stomach. Now, as both muscular motion and secretion are under the immediate influence of the nervous power, it is obvious that whatever causes an

irritation or morbid excitement in the nervous structure of this organ, must necessarily tend to derange the healthy performance of these two functions. Accordingly, every thing which is capable of causing indigestion, must act, either by interrupting the regular supply of nervous influence to the stomach, or by irritating the nervous extremities of the mucous membrane of this organ; or by producing both these effects simultaneously. Of the former causes, those that interfere with the regular transmission of nervous influence to the stomach, are the mental emotions. We must all have remarked, how suddenly, any temporary mental excitation depresses, nay, often destroys the keenest appetite, and consequently, for the time, the powers of digestion. When these mental perturbations are of a depressing character, and become chronic, they may give rise to protracted and exceedingly unmanageable cases of dyspepsia. Confirmed and unyielding indigestion is often induced, by the digestive powers being weakened, by the influence of protracted grief and despondency.

Protracted and intense application of the mind, attendant as it ordinarily is, by a sedentary mode of life, is another of those causes which act through the medium of the general system.

But by far the most common and powerful causes — as, considering the multifarious articles that constitute the food of man, we should infer — of dyspepsia, are those that act directly upon the nervous extremities of the mucous membrane of the stomach, producing irritation. The causes which most frequently give rise to this irritation, are over-distention of the stomach and indigestible and irritating articles of food. Over-distention of the stomach by the quantity of ingesta is one of the most common causes of dyspepsia, and there can be no doubt as to its decided tendency in this way. It is probable however, I think, that it is not so much by the over-distention of the muscular coat of the stomach by the superabundance of ingesta, that the disease is caused, as by the mere excess of food beyond what the organ is capable of digesting. Irritation is produced in this way precisely as it is by articles

difficult of digestion and of irritating qualities. When the food resists the digestive powers too long, besides its direct irritating impressions on the mucous membrane of the stomach, it undergoes decomposition, by which new ~~new~~ combinations, such as gas, acidity &c. are formed, which enhance the irritating qualities of the contents of the stomach. Besides these consequences of too long a retention of imperfectly digested food in the stomach, the muscular powers of this organ will be diminished by the long and continued exercise to which it is subjected, as well as by the over-distention and irritation caused by the gas. Portions, too of the half-digested food, will pass into the duodenum, which, being altogether uncongenial to the sensibility of this organ, will give rise in it to irritation, spasms, and pain, and by sympathy, functional derangement of the liver. When this general disorder of the organs is once produced by some error in diet, assisted perhaps by general causes, so great is the irritability of the mucous membrane of the stomach and duodenum intestines, that the slightest cause — even the ordinary digestible

and plain diet taken in health, will not only sustain it but often increase its violence, if favoured by other circumstances of a debilitating character.

Eating too fast may cause the disease, either by the imperfect mastication and insalivation which is necessarily connected with rapid eating, or by causing persons to take more aliment than the stomach is capable of converting into chyme. The appetite subsides only in proportion as the gastric juice becomes mixed and as it were neutralized by the food. When we eat rapidly, time is not given to the gastric fluid to combine with that part of the food which is presented to it; the sensation of hunger therefore continues, and we continue to eat until so much food is taken that the whole gastric fluid which the stomach is capable of supplying during the digestive process, is not sufficient to effect the due chymification of it. Whereas when we eat slowly so that a proper time is given for the combination to take place, the appetite abates before the stomach is overcharged.

The use of condiments, stimulating drinks, and high seasoned food,

produce dyspepsia by exciting an artificial appetite, and keeping up the desire for food longer than it would be sustained by the impressions simply of the gastric fluid. The free use of drinks immediately before, and particularly during meals, by diluting the gastric juice, tends much to weaken the digestion and to aid other causes in the production of dyspepsia. A very mixed diet — especially if the articles are of different degrees of digestibility — is a prevalent cause of the disease.

Chronic diseases of the liver, spleen, and pancreas, as well as uterine affections, frequently give rise, by sympathy, to dyspepsia. Tumours pressing upon the course of the pneumogastric nerve, and interfering with the innervation of the stomach, is not a very uncommon cause of indigestion. The use of tobacco, chewed, and more especially smoked is common cause.

In the treatment of indigestion, the first thing to be attended to, is to obviate as far as possible the usual exciting causes of the disease; and with this ~~view~~ attention should be directed chiefly, to proper dietetic regulations. In all cases, whether simple or complicated, mild or violent, an unremitting observance of suitable regulations in relation both to the quantity

and quality of the aliment, and the manner of taking it, is absolutely indispensable to success in the management of the disease. The patient should be directed to masticate slowly; to take his meals at regular hours; to avoid eating too much; to drink but little during and for a short time after eating; and to avoid taking active exercise during the first stage of the digestive process. Whether animal or vegetable diet will better agree with the dyspeptic, will depend upon the presence or absence of high irritation or sub-inflammation of the mucous membrane of the stomach and duodenum. In cases depending upon mere debility of the digestive organs, animal food is more proper than vegetables. The more digestible kinds of animal food, such as beefsteak, mutton, &c. should be selected. The kinds of animal food that have been found most easy of digestion, are beef, mutton, and all kinds of game — more especially venison. Fowl, if the skin be removed, next to mutton, is perhaps, upon the whole, the lightest animal food in common use. Terrapins alone, of the shell fish, can be used. The lean part of fat animals should be selected. It is important to attend to

the form in which dyspeptics take their food, and the manner in which it is cooked. Soup is a very indigestible form of animal diet, and should not be used. Simple broiling or boiling meat is the best way of preparing it for persons labouring under indigestion — fried articles of food being in general very objectionable.

The bread used by dyspeptics should be stale, or toasted bread, without butter; and for a change pilot bread or crackers. Warm or fresh bread is inadmissible. In some cases of dyspepsia much advantage is derived from the use of brown bread, but the slight stimulating properties of this bread to which it owes its virtues, makes it too irritating in those cases where there is morbid sensibility of the stomach. Fresh vegetables are very generally injurious, particularly Cabbage, turnips, peas, beans, and above all cucumbers, lettuce, celery, and other articles of this kind, taken in the form of salad, or in an uncooked state. Roasted potatoes generally agree better than any other vegetable. All kinds of pastry — such as cakes made with eggs, pies, puddings, &c. are exceedingly injurious. Moderate portions of brandy and water or old porter in slight

cases of indigestion may sometimes be used with advantage. Simplicity in diet is of great importance to the comfort of dyspeptics; and what is of equal, if not still greater importance, is, to take but moderate portions of food into the stomach at each meal.

A strict adherence to proper dietetic regulations, aided by exercise, either riding on horseback or walking, will, without the aid of medicine, cure many cases of that variety of dyspepsia under consideration — that which depends upon debility or inactivity of the muscular coat of the stomach.

That which depends upon chronic inflammation of the mucous membrane of the stomach, or of the stomach and intestines, is a chronic gastritis or gastro-enteritis, and has to be treated precisely as those diseases are; of which I need say nothing further, than, that a strictly antiphlogistic plan has to be pursued.

It is desirable in the treatment of this disease that the alvine evacuations should be regulated by a proper diet; this however except in the milder cases cannot be done, and we are obliged to resort

to the use of aperients. Rhubarb, either alone, or combined with aloes, is well adapted for this purpose – hence the practice of chewing rhubarb and swallowing the juice. Rhubarb and aloes combined with some aromatic, as in the following formula: Pulv: Rhei, Aloes, Capsicum, each one grain, made into a pill, is a good aperient when the bowels are torpid; and when there is much acidity in the stomach, the rhubarb may be advantageously given in combination with from ten to twenty grains of carbonate of soda, or with thirty or forty grains of magnesia. When it is necessary to give a mild cathartic to evacuate the bowels, a combination of Rhubarb Aloes and Jalap may be administered. Emetics in recent cases are sometimes useful to remove some irritating and indigestible ingesta, but their frequent employment is injurious. When it is necessary to excite vomiting, a strong infusion of Chamomile flowers may be given; if this should not produce emesis an ordinary dose of sulphate of zinc or sulphate of copper will have the desired effect. To remove acidity in the stomach the carbonated alkalies, as the carbonate of potassa, of soda or of ammonia or the alkaline earths, as lime water or magnesia may be given. The

latter is preferable when the bowels are constipated.

When the disease depends upon a morbid state of the liver, the blue pill or calomel must be given. Where it is symptomatic of uterine or other morbid affections, the treatment has sometimes to be modified to suit the circumstances of the case.

Tonics are sometimes useful in this disease. Of these the mineral are the best, especially the preparations of iron, as the carbonate and the sulphate of iron. The sulphate of zinc and the sulphate of copper, given in small doses, are useful in some cases. A great many of the vegetable tonics have been highly recommended. Gentian and quassia are perhaps the best.

The use of the warm and the cold bath, which has not yet been mentioned, is often highly useful in dyspepsia. Friction over the region of the abdomen with a cotton or woollen cloth, and kneading with the hands or knuckles, has cured many cases of the disease that have resisted all other modes of treatment.

An

Inaugural Dissertation

On

Helminthologia;

Submitted To The Examination

Of The Provost, Trustees, And Medical Faculty

Of The University of Maryland;

For The Degree of Doctor Of Medicine:

By R. D. Tatman,

of Delaware.

1837.

To R. Egglesfeld Griffith, M. D.,
Professor of Therapeutics, &c, &c, in the
University of Maryland,
Sir,

Permit me to dedicate this essay to you, feeble as it is, in token of the high regard entertained for you personally as well as for your talents, Rest assured that I shall always be thankful for those principles I have learned from you, of taking nothing for granted in the Medical science, and never to shrink from the investigation of truth, though it should upset all our preconceived ideas of things; and that theory should always be made subservient to facts.

I am, Sir,

With respect,
Your obedient Servant,
C. D. Tatman.

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Section 1 st.

Description of worms, and a short account of their origin.

There are many kinds of worms found in the human body, but those generally met with may be reduced to four genera — the nematoidea, the taenatoidea, the cestoidea, and the cysticea; though authors describe many others, but as they are but seldom found it is unnecessary to expend our time in describing them.

Of the genus Nematoidea we have seven species, as follows:-

The Guinea-worm,	Filaria medinensis.
The hair worm,	Trichocephalus dispar.
The lumbricoid.	Ascaris lumbricoides.

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The maw-worm, Oxyuris vermicularis.
The kidney-worm, Strongylus gigas.
The bladder-worm, Spiroptera hominis.
The bronchial-worm, Filaria hominis bronchialis.

Of these seven species there are but four deserving of particular notice:- the lumbricoides, the trichocephalus, the oxyuris, and the strongylus gigas, and indeed the last is not of much consequence as it is but seldom met with.

Before giving the individual history of these worms it will be necessary to say a word on the class generally- Nematoidea, (from νημα, a thread, and ειδος, resembling.) body round and elastic. The intestinal canal commences at the head and terminates at the tail. There are some individuals masculine and others feminine.- These worms are long and thread-like as their name imports. They are generally active, hence the term ascarides which is commonly applied to this class, from ασκαριζω, "I jump." They are found more frequently than any others.

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The Tricocephalus dispar has been called by a variety of names, as Trichuris, Ascaris trichuris, Mastigodes hominis, &c. but the name here adopted appears the most entitled to respect as it conveys a better description of the worm than any its synonymes — from τριχος, a hair, and κεφαλη, a head.

This worm is about an inch and a half long — but variable — with an acute head, and spirally entangled or involuted body in the male; the female straighter. The capilary portion is about two thirds of the whole length, and is filled with an opaque whitish or brownish matter. The anterior capilary portion terminates abruptly in the posterior. They have an orbicular mouth, and the organs of generation in in the male are simple and vaginated, according to the microscopic views of Rudolphi.

The tricocephalus generally occurs in the cæcum and colon, but more commonly in the former. Although it is not common for them to be numerous, Rudolphi says he counted more than a thousand

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in the intestines of our subject. But it is a rare occurrence to find them so plentiful. They are not met with in this country, or, if they are, but seldom.

Ascaris Lumbricoides, (from lumbricus, an earthworm, and εἶδος) has a goodly number of hard names, as ascaris gigas hominis, lumbricus teres hominis, fusaria lumbricoides hominis, lumbricus intestinalis, &c. This worm is from eight to twelve inches long, from one to two lines in thickness in the centre. They are of various colors from a dull white to a brown. The head is nudous and tail obtuse, and body furrowed on each side. After expulsion this worm becomes quite stiff, though while alive it is active enough.

They are most commonly found in the small intestines, especially in the Ileum; but they are frequently vagrant and wander into the pancreatic duct and ductus communis choledochus, and gall bladder; and it will sometimes ascend into the stomach and oesophagus, but in this case they

generally make their exit through the mouth. In this act they sometimes cause strangulation by getting into the air passages. In many instances they become so numerous as to fill the whole intestinal canal from the pylorus to the anus. They frequently become knotted and entangled with each other, and are voided en masse.

Oxyuris Vermicularis - ascaris vermicularis, Fusaria vermicularis, ascaris pollicaris, ascaris caudo subacuta, &c, are a few of the names applied to this worm. This worm is commonly from two to eight lines in length. The head is obtuse; the tail of the male is spiral and blunt, that of the female is straight and subulate. They are of an opaque whitish color, and very elastic.

These worms are very gregarious, and are never found alone. They are mostly wound and convoluted upon each other, and covered with mucous, so as to be almost invulnerable to common vermifuge remedies. They are generally found in the

rectum, though they are often migratory and pass into the colon, cæcum and small intestines, and not unfrequently descend from the rectum and enter the vagina in women, and in some cases they may be found in the urethra - When they have entered the vagina they cause some uneasiness - a peculiar titillation and a discharge of mucus are the symptoms. Nymphomania is sometimes the consequence of these parasites being in the female organs of generation. The oxyuris has been found in the fœtus and new-born infant; and it has been seen in the stomach encysted in the membranes; though it is necessary to say that mistakes have been made relative to this worm, others having been taken for it.

Strongylus gigas. This worm is from ten inches to two feet long, and from two to six lines in diameter. It has a blunt head, and there are six small papillæ surrounding the mouth. The tail is rounded, especially in the female. The bursa of the male is slightly truncated.

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The Strongylus gigas is commonly found in the kidneys of man and the lower animals, though some say they have seen it in the intestines; but I am inclined to doubt the truth of this assertion, for it would be an easy matter to mistake a Lumbricoid for this worm of the kidneys.

When the Strongylus is evacuated it must be through the natural passages for the urine, and consequently causes some uneasiness when large. Fortunately it is not found in this country - or at any rate very seldom

Trematoda (from τρημα, a foramen.) The body in this order is soft and flattened or roundish. The pores are suctorial. The individuals are all androgynous. Of this class there are three species found in the human subject:-

The Fluke, Distoma hepaticum

The worm of the ovary, Polystoma pinguicola.

The worm of the brain, Polystoma cerebrum.

But it is very seldom that any of these are found in

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this country – The distoma hepaticum is sometimes found and consequently deserves some notice. The Polystoma venarum is sometimes found but cannot be got rid of by any means now known.

Distoma hepaticum (from δύς, two, and στομα, a mouth,) is about an inch long, and five lines in breadth, of a yellow, green, or brownish color. The form is ovoid, flat, with a slightly conical neck. Pores orbicular. The ventral larger than the oral.

This worm is sometimes found in the intestines of man, though in these cases it has always passed from the liver which is its natural habitation. It is found in the gall-bladder, the vinda portarum &c. Though it is more properly a parasite of the lower animals than man; and is very often met with in the liver of the cow, the horse, the deer, the goat and the sheep, &c. It is supposed to be the cause of the disease of sheep called "rot." – But it is of little consequence in a medical point of view, as it is difficult to decide on the symptoms caused by it.

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Cestoidea (from κεστος, a belt, and ειδος, like.) – The name of this class of worms expresses its general appearance – The individuals are hermaphrodite. – There are two kinds of Tape-worm found in the human intestines:-

The broad tape-worm, Bothriocephalus latus.

The long tape-worm, Taenia solium.

Bothriocephalus latus (from βοθριον, a hollow, and κεφαλη, a head.) Taenia lata, Taenia osculis lateralibus geminis, Taenia acephala, &c, are a few of the names by which the broad-tape-worm is known. It is from five to twenty feet in length, – but it has been found much longer – It is from a quarter of an inch to an inch and a half in breadth at its widest part; of a dirty white color, The body is elongated, depressed and articulated, The head is in shape a sub-tetragon, with oblong depressions. The anterior articulations are like folds. – It is seldom voided whole.

This worm is found in the upper part of the small

intestines and stomach.— It has been found as much as sixty yards long, if we may believe authors, though I am inclined to think that the reports of broad-tape worms of such an enormous length, are exaggerations. It is said to be more common in Russia than elsewhere.

The Tænia solium, (tænia cucurbitina, halysis solium, Tænia osculis marginalibus solitariis, &c.) is of great length, but is generally voided in short pieces, a few joints at a time. The body of the tænia solium, like the preceding, is elongated, depressed and articulated; the head nearly hemispherical and discrete; the mouth is obtuse— The neck is short and full anteriorly— the joints next the head are short, those towards the middle are almost square; near the tail they are oblong. The foramens on the margins are irregular.

This worm possesses the power of contracting, elongating, enlarging and curling up. It has

likewise an undulatory motion by which it is enabled to change its position; which, according to many authors, is the cause of the wright experienced by persons affected with taenia. This happens whenever the person turns in bed. When undue pressure is made upon the part where this parasite is located, or when it is disturbed by anthelmintics, or food that is disagreeable to it, or when the patient is about to die, it lets go its hold and jumps about, and fall into convulsions. It is sometimes found in company with other kinds of worms, though it is seldom that it is seen with any other of the same kind.— It is principally confined to the small intestines.

<u>Cysticea.</u>— There is but one worm of this order worth describing, and indeed it hardly needs a minute description— The cysticercus cellulosa— found sometimes in the brain. It is ~~sim~~ many cases the cause of considerable uneasiness,

by giving rise to symptoms so nearly simulating apoplexy as not to be distinguished from it. Death always follows. It is the worm described by Professor Brera as the vesicula vermicularis: he says "the head is that of the tænia, and the rest of the worm is a vesicle filled with water." In one subject that he examined he found the ventricles of the brain filled with these parasites, or hydatids - But Bichat denies that they are worms and says they are nothing more than a morbid appearance depending on the peculiar disease, though I am inclined to take the side of Brera, for it is not likely that so accurate an observer of worms as he should commit such a mistake.

Origin of worms. This question is involved in much obscurity, and examine it in what light we may insuperable difficulties are presented to us. It has been the cause of many warm

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disputes between members of the Medical profession, and many beautiful theories have been built up, to be demolished by some future aspirant for fame. They have been allowed "to strut their hour upon the stage," and then compelled to give way to those that were to follow. Authors have revelled in their temporary triumph; and each has saved something valuable from the systems that were promulgated prior to his time, and we have many ~~valuable~~ facts, but so mixed with hypothesis as to be of little use until they shall have been separated by adequate hands. The whole superstructure is as yet a chaotic mass - the materials are there, but they have not been properly arranged - Though it is unphilosophical to say we have facts enough, for in truth we have but few that we understand. Hypothesis ought in no instance to be substituted for fact, but when we have not the latter, we are in many cases obliged to resort to the former.

Now in relation to the origin of worms there

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are two opinions at the present day — one that they are generated from ova received from without the body, and the other that they are the result of equivocal generation. — If they arise from ova received from without the body, there must necessarily be similar worms out of the body; and all modern helminthologists have failed in their search for such worms. It is true that Linnaeus says he has seen the distoma hepaticum in fresh water, the tænia in muddy pools, and the oxyuris in the rotten roots of plants. Unger pretended to find the tænia in a well, and Gadd says he found a species of tænia in a rivulet. And there were others who saw, or thought they saw the same kinds of worms in rivulets, wells and springs; but Mueller who spent much time in looking for some evidence of these things, was not successful in finding any of them. On the other hand it is affirmed that various kinds of entozoa have been found in

the intestines of the fœtus and new born child. Thus Herckring saw ascarides lumbricoides in a fœtus six months old. Heim saw tænia in a new born child; and Boundel saw tænia in a fœtus in utero. Frommann asserts that he found the fluke in the liver of a foetal lamb. Blumenbach saw tænia in a new born puppy. I have seen entozoa in the intestines of a foetal colt.

Those in favor of a spontaneous generation of these parasites regard the preceding facts as a complete stumbling-block to the advocates of the opposite doctrine; but in return they say that intestinal worms may propagate by ova so small as to pass into the circulation and thus pass from the mother to the fœtus. Dr Mason Good has spoken very learnedly on this subject and supposes that the ova of the low animals and plants are continually floating in the air, and are thus conveyed to the stomach of man and animals and from their minuteness may then be absorbed and enter

the circulatory system, whence they may be transmitted to the brain, the liver, the kidneys and the foetus.

Probably the wisest plan, is to confess our ignorance on this question, for really we are in possession of no means for proving that the origin of these parasites is by singular, or equivocal generation. But be it by what means it may, it is certain that a peculiar morbid condition of the alimentary canal and organs of secretion is necessary to the developement of worms. Andral speaks of entozoa under the head of "lesions of secretions," and looks upon them as morbid signs of certain diseases. Broussais attempts to prove the origin of worms by his touch-stone, gastro-enteritis. But this is in all probability not true. Generally persons of a weak constitution, and of a pale and sallow complexion are very subject to worms and verminous affections. When the digestive function is disordered and the stomach is over loaded with crude

aliment, or aliment of an oily nature, and especially if the person pass a sedentary life, worms are very apt to be produced. Children of a lymphatic temperament and lax muscular fibre are oftener affected with entozoa, than those of a sanguine, or nervous temperament. It has been asserted by some that the free use of sugar causes worms in many cases. Brunner thinks the milk and cheese diet of Switzerland is a great cause of the abundance of worms in that country. Some have supposed that a fish diet was a powerful predisposing cause worms, but this is not true, or the people who reside on the shores of the Delaware would be very subject to them, for they eat great abundance of fish during the Spring and Summer, but they are nearly exempt from those disagreeable and disgusting creatures. In Europe much of the mischief caused by worms, depends on a deficiency of chloride of sodium in the food of the poor. Indeed common salt is so great a preventive of worms, that

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Dr. Rush always used to administer it in cases of lumbricoids.

In this country the Ascaris lumbricoides is met with in ten cases where tape worm occurs once. Next to the lumbricoid in frequency is the oxyuris vermicularis. The tricocephalus does not occur so far as I know. The distoma hepaticum is not met with in ordinary practice. The strongylus is of little consequence to the American physician. The vesicula vermicularis may frequently occur, but its situation is such as not to attract attention. Of the two species of tænia - the tænia solium is the one mostly met with.

Section 2nd.

Simptoms of worms and the treatment.

In speaking of the symptoms that indicate worms in the human intestines, it is necessary to premise that there is not a single sign caused by these parasites, that does not

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occur as the symptom of some disease unconnected with worms. Indeed the only sure indication of the existence of entozoa is the evacuation of them. Those symptoms that usually appear when worms are in the intestines, are the following:— The first that strikes the eye of the physician is the change of the countenance. It being sometimes pale, at others red, or of a peculiar leaden hue. Very frequently a semicircle of a sky-color is observed immediately under they eyes - which latter lose their vivacity and present a dull, heavy appearance. The lids become tumified, and the pupils in some instances are dilated. The lids and sclerotic coat frequently become icterode. Frequently the patient is tormented with intolerable itching at the nose and anus. Epistaxis is said by some to be a frequent occurrence when worms are present in the intestines - Tumifaction of the upper lip

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is regarded by many as a certain indication of entozoa, but like all the other signs it may be seen in diseases when nothing like "worms" are present. Troublesome colica pains are very frequent, and borborygmi are not uncommon, although very little flatus is discharged. At times the appetite is voracious, at others the sight of food disgusts the patient. The abdomen will become tumid and hard and tender to the touch. Saliva is copiously secreted, with a disagreeable fœtor attending the breath - this is the "vermicious breath" of Buera. In many cases there is nausea and vomiting - Slimy fœtid stools, or constipation, The urine is thick and yellowish, or milky. There will be great lapitude, restlessness, and irritability of temper - The body when not tumid will be emaciated, &c. But, as we said before, none of these symptoms are to be depended on.

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Treatment. It is a question with many whether worms deserve any kind of treatment at all, but to let them alone. This arises from the supposition that they are harmless inmates of the alimentary canal, and merely depend on some peculiar morbid affection of the digestive apparatus, and that when this state is overcome, the worms will be voided by aid of the vis medicatrix naturæ. This may appear to be a visionary notion, but there are many respectable physicians who are of this opinion. But it is better to resort to some means to expel them when worms are known to exist.

In this country the practitioner has to deal principally with the lumbricoid. The best way to get rid of this worm is to keep the patient on a spare diet for a few days, and to give an ordinary dose of sulphate of

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magnesia once a day for three or four days. After the expiration of this time, we may order a dose of spigelia marylandica, which is best given in decoction.

℞. Spigel. Maryland. Rad. contus ℥ j.
Aq. Font. - - ℔ j.

This ought to be boiled to half a pint and given about an ounce at a dose. As this remedy possesses strong narcotic properties, it is best to administer it at night, when this will not interfere with the affaires of the patient nor alarm the friends; after this a mercurial purge ought to be given for the purpose of expelling the dead worms. Besides this the chenopodium anthelminticum is an excellent article for the expulsion of the round worm. The expressed juice of the green plant is a good way to give the remedy - a table-spoonfull night and morning. This is a common way of admini-

tering this article in the country during the summer season. But the essential oil of the seed is a preferable way of exhibiting the chenopodium. This may be given in doses of eight drops to children ten years old, and in smaller doses for younger children, and in larger doses to those that are older. After this a good dose of calomel ought to be given to expel the worms. Spirits of turpentine is an excellent anthelmintic and is frequently administered for this purpose in the case of lumbricoid. Many physicians make use of tin filings for vermifuge purposes, but this is a dangerous remedy as it is apt to accummulate in the intestines and form metalic balls, which is an unpleasant occurrence, Chloride of sodium has been recommended and was used by Dr. Rush in great abundance, and indeed if we judge from analogy we might suppose that it is a very good vermifuge, for it is a fact

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that all worms have a great antipathy to salt and when salt has been accidentally spilled on the ground the lumbrici immediately recede from the spot or die.

There are a great number of articles recommended for the cure of verminous affections, but we have noticed the best.

After the expulsion of worms we must have recourse to tonics and nutritious diet. This holds good of all the worm diseases. As Professor Griffith says, the nutrientide are the surest and best tonics. We must endeavor to correct that peculiar morbid state of the nutritive function that favored the production of these parasites. And this is to be accomplished by abstaining from the unhealthy food that has caused the mischief and resorting to a more substantial and nutritious diet. If this be not done in all probability a reproduction of worms

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will take place, and, indeed, the unfortunate individual may linger out a life of uneasiness to himself and vexation to his friends. The different preparations of iron have been used very frequently as a tonic in this morbid state, and with a good-deal of success. The free use of table-salt is a great is a complete safeguard against these annoying and disgusting creatures.

The oxyuris is more difficult to get rid of than the preceding, from the fact that if the intestines be not completely cleared of them, in a few weeks they will be as numerous as ever. From these worms' being in the rectum, the common vermifuge remedies will have but little effect on them - unless given in enemata. The drastics may be administered, But the best means of getting clear of them, is to take a bougie smeared with camphorated mercurial ointment and insert it into the rectum.

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By repeating this operation frequently, the worms will be entirely destroyed, and laxative medicines may be employed to drive them off. When they have entered the vagina, injections of cold water is the best remedy, and will seldom fail.

The treatment for the trichocephalus, and many others it is unnecessary to say any thing, as they do not occur in this country so far as I know. We will go on to speak of the treatment for tape-worm.

The tænia solium is the one we have mostly to deal with. In the treatment for this worm it is necessary to follow the preliminary measures mentioned in speaking of the treatment for lumbricoid. After pursuing this plan for some days, we may exhibit the male fern in doses of two drams daily for a day or two, and then a dose of carbonate of potassa; or, we may use the active part

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of the plant in doses of from 10 to 20 drops, and then the carbonate of potassa as in the other instance. Probably the best remedy we possess is the pomegranate tree - A good way to administer this is in the following decoction:-

℞, Granat. Rad. cort. ℥ij.
Aq - ℣ont. ℔ jss.

This is to be boild to a pint, and given in three doses. The fresh bark is far preferable, After the administration of the third dose of this medicine an active purgative ought to be given. - Spirits of turpentine have been highly recommended for the destruction of tape worm, and there is no doubt but that it is an excellent remedy -- There are many other remedies used, but the granatum is by far the best as yet known -

After the expulsion of this worm we must have resource to the same tonic

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plan of treatment as before recommended. Both species of tape-worm are to be treated alike - care should be taken that the whole of the worm be voided. ---

An
Inaugural Dissertation
on
The Principles of the Pathology
and Treatment
of
Congestion;

Delivered to the Provost, Trustees, and
Medical Faculty
of the
University of Maryland,
for the Degree of
Doctor of Medicine,

By Thos. Ryland Collier,
of
Somerset County, Maryland.

1837.

Principles, &c.

I am induced to write on this subject, since it is one which, though very important, has received very little attention. Comparatively few seem to have any definite views relative to it; and those who have seem to me, so far as I am acquainted with the views of physicians on the subject, to entertain some very erroneous ideas, notwithstanding several hold views which, in many important particulars, are similar, nay, identical, with those which I shall lay down in this paper, which, altho' they seem to myself to be perfectly correct, and to account satisfactorily for all the phenomena connected with this condition of the body, I am, nevertheless, not willing to suppose, are really perfectly tenable, till they shall have born the scruting of those, before whom I now lay them, whose minds, unbiased by other views, ever open to conviction, are fully qualified to appreciate the truths, and to condemn the errors herein containd, or until from

farther and more mature reflection and observations made at the bedside of the sick, I shall be confirmed in my views — then and not till then will I speak with absolute confidence on the subject.

The causes of this condition are whatever weakens the sympathetic, and through it, the whole system of nerves; this I believe is admitted by nearly all, and is sufficiently evinced by the general malaise, or disinclination to all mental & corporeal exercise, the constant harbinger of an attack of congestive disease, except where the cause operates so intensely as to occasion an attack without time having been afforded for the developement of those premonitory symptoms, in which case, however there are sufficient proofs of this view of the modus operandi of the cause. Some of those causes I shall now mention; some regard a deficiency of Electricity in the atmosphere as the predisposing cause of this state of the system. If a due supply of this fluid in the atmosphere is important to the vigorous exercise of the functions of

independently of any contagion to which their existence has been, by some attributed, It is true that I am now only dealing with congestive diseases, but inorder to establish the fact that the above named circumstances do occassionaly give rise to it, independently of contagion it may be proper to ask, Under what circumstances do diseases which are universally admitted to be contagious become congestive? I think that it will be found that they assume this form most frequently when placed in such a situation as is above described; and always when only some debilitating cause operates in conjunction with the specific cause of the disease, It is impossible for me to suppose, with some, that the assumption of a congestive form ever renders diseases, otherwise non-contagious, contagious, I will now present a specimen of the illogical reasoning, adopted by some to prove this: their datum is that "typhus is contagious(?) Whenever they see a disease assume the chief phenomenon of typhus, viz, congestion, the say that it is contagious; why? because it is like typhus, with regard to congestion, ergo, it is like it with regard

to contagion! what logic! E.G. They regard "Malignant" Dysentary, as a contagious disease "because", say they, "it is simple Dysentary with Typhoid Symptoms superaddd". The comments are obvious. It may be wele, however, here to adduce positive proof that congestive diseases are not necessarily contagious; this I had an opportunity fully to prove, in September last; I was acquainted with nearly one dozen cases of congestive disease, one of which, (being under my own immediate care I had the best opportunity of observing) very much resembled true Typhus; and in not one single instance, I believe, did the same form of disease occur, a second time in the same family. Had it been contagious could those, who nursed the patients and who were with them almost constantly, have escaped? Impossible. The ~~depressing passions~~ are a fruitful source of this State. The exciting causes are the predisposing causes operating with more power; and such causes as excite the particular disease which assumes this form, acting upon one predisposed to it; e.g. the contagion of small-pox operating upon a good constitution produces regular, inflamma-

tony Small-Pox but when the constitution, upon which it acts is particularly predisposed we have the congestive form developed; here had not the exciting cause of Small-pox operated upon the system no congestion would have been caused.

The cause, operating particularly upon the ganglionic system of nerves, debilitates them, and with the rest, those which preside over the function of circulation — the whole system is debilitated, and, in common with other parts of it, the circulatory apparatus, the walls of the immediate organs of which function are thus, in a great measure, deprived of their elasticity, and power of resistence — the heart thus deprived of its power cannot propel, with its accustomed energy, the blood through the lungs, nor can the pulmonary arteries, thus al-

so having lost much of their force, and having a resistence afforded them by the lungs, as we shall presently see, transmit it with sufficient force to prevent its accumulating in them, in which manner, the right side of the heart and these arteries become distended with blood: the vessels of the substance of the lungs having also lost those powers permits the blood to accumulate in them faster than they can throw it off; these organs become thus congested: the blood in them, almost stagnant, does not undergo sufficient oxation to afford proper stimulation to the left side of the heart, even in its natural state, and it now being deprived in a great degree of its power derived from the nerves, we can easily conceive that it can not propel, and the arteries, also weakened, cannot

actively transmit, the blood as far as the extreme vessels, as long as very weak and dilatable vessels are nearer to receive it; hence the cold and unexcitable state of the former or vessels of the surface and extremities, and the congested state of the latter, or vessels of the viscera, which are so weak that they cannot resist the accumulating ingress of blood into them, nor can they rid themselves of it for two reasons; first, they are too much debilitated in the first instance to transmit it with wonted promptness, and they are rendered the more incapacitated to do this by the progressive increase of its quantity in them; and secondly, there is an obstacle afforded by the already full & congested state of the right side of the heart and the pulmonary arteries and the lungs; the veins being physically weaker

than the arteries are consequently the seats of the congestion: and the arteries, rather, except in very severe cases, than be much overdistended, transmit the ~~the~~ blood farther from the heart, where there is no actual resistence as in the greater circle, but where this resistence is offered, as in the lesser circle by the congested state of the lungs, they become considerably engorged; and it is by the vis a tergo exercised by them and the right side of the heart that the blood, which would perhaps be otherwise completely stopped in its progress through the lungs, is sent back to the left side of this organ. In whatever viscus the vessels are weakest and least resistent, that viscus suffers most from congestion; hence the predominance of congestion in the liver in malarious districts.

One of the most prominent phenomena attending this state, for we find it in all congestive diseases, may be here considered; and is very satisfactorily explicable upon the views above laid down; viz. the black, dissolved state of the blood. "The lungs become congested with this fluid in its venous state, as we have seen above, whereby it does receive proper aeration, or is not completely converted from venous into arterial blood, which alone is fit for nutrition; being returned to the heart in this half venous, half arterial state, it is propelled into the capillaries, there to undergo again those natural changes which it is the function of those vessels to impress upon it; i.e. conversion into ~~venous~~ blood — arterial blood being alone fit for-

nutition, that portion of the blood only, transmitted to the capillaries, which has been oxydized, which we have seen to be less than natural, (or less oxygen than natural has been received into the circulating mass) is converted into venous blood, thus rendering that, which is now in the veins, still more widely different from pure arterial blood than that which was in them at the last round of the circulation; in other words, the characteristics of venous blood are now still more strongly developed, and continue to be more and more so each time the blood passes through the lungs and capillary vessels of the greater circle. "What are these characteristics of venous blood? They

are as follow; 1st venous blood is darker than arterial; 2ndly it is less coagulable; 3dly it is colder. What are the characteristics of this, if I may use the term, congestive blood? They are just what we should a priori suppose; viz; 1st it is still darker; 2ndly it is still less coagulable; and 3dly it is still colder, than common venous blood; and these characteristics augment in a ratio with the intensity and duration of the congestion, independently of serous exhalation from the intestines, to which some eminent physicians have resorted for an explanation of the phenomenon, but which is rendered the less probable by the fact that in simple Cholera Morbus we often do not find it even where there is much of this exhalation, whereas it is strongly displayed in

in some cases of congestive Intermittent where there is no discharge of this serum.

There is a point of great importance in the pathology of Congestion which it is necessary for me here to notice inasmuch as a large majority of the profession are of the affirmative opinion; that is, is Congestion Inflammation? I think not. I am not now speaking of that state to which M. Andral applies the term Congestion, succeeding to acute inflammation, for the relief of which we have to employ stimulants, and which is commonly called Asthenic Inflammation; but of that state of the viscera in which all the veins and venous side of of the heart are over distended with blood. Altho' the term Inflammation, since it

conveys to our mind the idea of something active, is not an appropriate one for the above named state, yet, considerati's considerandis, it is perhaps a better one than congestion, at least unqualified by some epithet. I shall first point out the difference between sthenic, and afterwards between asthenic inflammation and congestion, since there are some who regard it as active, as well as many who look upon it as atonic inflammation. Let us then, in the first place notice some of the characteristics of congestion, 1st. so far as the circulation is concerned, the first agent in its production is the heart; 2ndly its principle seat is in the venous apparatus, including, the veins proper, the right

side of the heart, and the pulmonary arteries, which last are congested by the impediment offered to circulation through them, just as the veins are by the impediment in the right side of the heart, I do not mean that these are the sole causes, but merely as it affords this obstacle to the transmission of blood through these vessels, whereby it accumulates in them; 3dly the capillaries are congested consecutively to the veins, and, until their functions are overwhelmed by this congestion, and even after it has begun to display itself in the veins, their action is the same as that which they have in their purely physiological state, viz. heat by nutrition, secretion, or absorp-

tion, tho' this action is exerted in a less powerful degree, let us now see what the characteristics of active inflammation are; 1st. The diseased condition is seated in the capillaries, these performing an unnatural action, producing, instead of healthy nutrition, an unnatural deposition, of which swelling is the consequence, — instead of healthy secretion, either an entire suspension or a vitiation thereof, — instead of absorption being carried on, it is, for the most part, completely suspended. In short, it consists of an alteration in the vital functions of these vessels independant of their office in the circulation, whether dependant on increased or diminished

capacity of the calibre of the vessels concerned; 2ndly the action of the arteries is distributed to the inflamed parts depends at first upon the action of the capillaries of that part; 3dly the consecutive excitement of the whole circulatory system is the effect of the operation of the local inflammation upon the general nervous system through the nerves of the inflamed parts. It would at first view seem paradox that the inflammation is the effect of the action of the nerves on the vessels, and that nervous excitement is the effect of the action of the inflammation upon the nerves. The local inflammation is however the effect of altered action of the nerves, the general fever is the effect of excited action of those organs. Every body has

has observed the increase of burning pain which supervenes upon the full developement of inflammation, and which did not exist before; and every one is acquainted with the effects which the infliction of local pain, especially with heat, is capable of exerting upon the whole system, comparing the two states, who can see one single mark of identity? on the contrary, are not the distinguishing marks of the two conditions in diametrical opposition? Let us now compare the ~~[illegible]~~ symptoms of each. Those of Inflammation are commonly laid down as Redness, Swelling, Heat, & Pain. How many of these belong to Congestion? and how are such as do produced? 1. Redness; altho' there is redness in congestion as well as in

inflammation, this redness differs for the most part in the two in shade, in this it is bright, in that it is dark; moreover in this it is the consequence of the rapid circulation of blood through the part, in that it is the necessary consequence of an accumulation of blood, from a tardy circulation, in the vessels; 2. swelling; this is common to both; in inflammation, however, it is chiefly owing, in acute, to the effusion of coagulable lymph, and in chronic to a morbid nutrition or hypertrophy the consequence of the partial organization of this effused lymph; in congestion, on the other hand, it is merely, tho' the necessary, consequence of the dilitation of the vessels independently of effusion; 3. heat;

and 4th pain; both these are absent in simple congestion, when, as it undoubtedly it may be, it is not combined with inflammation; indeed, so far from these being present, we find patients, labouring under deep congestion, having a surface, even over the abdomen, below the natural temperature; and manifesting a perfect indifference to every thing around them, evidently the effect of nervous insensibility. It now remains for me to prove the difference between Congestion and Atonic Inflammation, On this I shall be very brief. What is the seat of this morbid condition? Its prime seat is in the capillaries of the part affected and consists in an alteration of their functions, as in acute inflammation, except that it is in a less ac-

cility as in perfect health; moreover we are also to bear in mind that the blood now in the system is unequally distributed, so that those vessels which have a superabundant quantity of it must labour under a peculiarly embarrassing weight; now by removing a part of this fluid, we enable those overloaded vessels to perform their office by suiting the weight to the ability of the moving power; and thus when the equilibrium is restored between the arteries and veins it is more likely to be sustained because, the whole apparatus being weakened, the burden which it has to bear is diminished. The proper method, of course, for effecting the object in view is to draw the blood immediately from the overloaded vessels; then being the veins we should by all means draw it from them and, on no account, from the arteries, a practice frequently adopted by some and even by Dr. Thom-

a direct and powerful sedative, and by many considered as such even in this affection. Professor Alison, in a lecture on Intermittent fever, uses the following language; "The immediate or ultimate effect [of bleeding in the cold stage] must be debilitating;" and reasoning, a priori this would seem to be true, but there are modifying circumstances to be considered, which place this assertion in a very different light, for although, after the bleeding the patient is weaker than he was before the attack, yet he is stronger than he was immediately before the abstraction of the blood; in fact, we bleed, not to produce, but to remove debility, or, what is equivalent to it, to reduce the amount of the circulating fluid to the capacity of the agents of the circulation. Now we are to remember that the power of the circulatory apparatus is diminished, and that consequently it can not convey its natural supply of blood with the same fa-

less successful. We can hardly suppose that it acts as an astringent; nor is its action upon the liver sufficient, in my opinion, to account for its efficacy. The most plausible, if it has been fully established, is its power in increasing nervous excitability. Altho' the doctrine of specifics has, perhaps, more than any thing else retarded the progress of medicine, and altho' I am by no means an advocate for it, yet really there sometimes appear to me to be something specific in the operation of this agent upon the system. One however, and perhaps not the least, of its virtues, is its action as a cathartic, whereby depressing accumulations are evacuated from the bowels.

Wordsleeling, Stomach, prima facie, appear inconsistent, that, after having said so much about debility of the nervous system, and indeed the whole system, in this affection, I should recommend what, under ordinary circumstances is

doctrines contained in this paper, rests upon the fact that these depend upon want of power in the nervous system; and is it not contrary to all established principles (for we do not hold the Homœopathic doctrine, "similia similibus curantur") to give an article to cure a disease which will induce that disease? Is it not therefore very unphilosophical to administer direct sedatives in this affection? When however it is conjoined with inflammation their use is life equivocal.

Calomel. This has indisputably been found eminently successful by almost all in the treatment of this form of disease, but how it acts, I confess that I am not perfectly satisfied; does it act as a stimulant to the debilitated vessels or nerves? Other stimulants of even greater strength have been found

hold those doctrines, we should be greatly remiss in our duty if we neglected this means, were it in our power to command it, until those points be absolutely proved to be false; however we should not procrastinate, for its employment, the use of those means which have been found so useful in the hands of practitioners generally.
Cold drinks, refrigerant medicines. This is a subject which demands particular attention, some considering them useful, others of little consequence either good or bad; but I must say that in inflammatory congestion I consider them highly injurious. How do they act? certainly as sedatives; how do they operate? by lessening nervous excitability. The very foundation of the

condition in certain diseases is a deficiency of this fluid in the atmosphere (which I cannot say I am not inclined to believe from the fact that persons living on one side of a street are affected whilst those on the opposite are not) and particularly if, in connection with this, it can be proved that the nervous energy is exerted by electricity, or that the nervous and this fluid are identical, there certainly would be strong and philosophical grounds for presuming that this agent might be advantageously used in the treatment of, at least, such diseases; and in very severe cases, where the means usually adopted are inadequate to its subversion, surely, upon the supposition which exists in the minds of so eminent men as some who

ties are undones cold by intense inflammation in those cavities; in uncomplicated congestion the pulse is generally very small and weak. With respect to the treatment of this state, I shall only examine the general points, without regard to the interminable minutiæ adopted to relieve every substituent symptom that may accompany it.

Electricity. Altho' the employment of this agent in the cure of disease is regarded by many as visionary, and perhaps justly so in a large majority of the affections in which it has been employed, and as affecting cures only through the medium of the of the imagination, which is acknowledged by all to have a powerful influence over the body, yet, if it can be established that the cause of this

form, such as usually termed, "Malignant," "Putrid," &c. It is generally, and when it does not come too suddenly, preceded by a general sense of lassitude of body & mind; its actual existence is indicated by dyspnœa, caused by the engorged state of the lungs; livid colour of the countenance and surface generally when any colour exists in them; arising from the imperfect aration of the lungs, and engorgement of the venous system; cold extremities when it is not very slight, and even when below the natural standard of temperature; the temperature of the abdomen is also less than natural except in very slight cases, or when it is conjoined with visceral inflammation; when unconnected with inflammation, there is no pain upon pressure on the abdomen or thorax, as there is when it is thus connected or when the extreme-

sufficiently manifest for detection. When an inflammatory action exists in the capillary vessels of an organ which are about to become congested, at the supposition of this condition, these vessels will continue to exert their inflammatory action until their power shall have become overwhelmed by the excessive engorgement which eventually occurs in them, while other organs may be at the same time deeply congested. Meanwhile when reaction is taking place, or congestion entirely disappears, parts predisposed may, and in perhaps nine cases out of tenth, become the seats of inflammation.

It may be proper for me here to sum up briefly the most prominent symptoms of this condition of the body. To give every symptom that is ever connected with this condition would almost be to write a work on nosology, for there are few diseases which may not under particular circumstances assume this

tive degree, but becomes somewhat analogous to congestion from the circumstance that their parietes, from previous excessive action, or some other cause, have become weakened and thus distended with blood; but here the congestion results from an increased or altered nervous action, and is first seated in the capillaries themselves, whereas in congestion the nerves are debilitated, and their action unaltered except merely so far as this debility effects a diminished action. I think the distinction is sufficiently obvious to require no further exposition. Having, I think, fully proved that congestion is not necessarily inflammation, I may now shortly show what I have before hinted, that these two states may coexist; in which case the symptoms of inflammation, (unless it be of the atonic character, (in which case it makes little difference, for the treatment is the same) will be

the functional derangements of the digestive organs, Mercury in minute doses exerts a salutary influence, subverting the morbid action, and that too by its insensible alterative effects, without affecting the mouth. In these cases no decided disturbance of the vital functions takes place; but the alvine discharges, if clay coloured, are generally restored to their natural hue, a certain proof that the remedy is stimulating the liver; and promoting secretion of bile. Indeed there is no fact better established in medicine, than that of the influence of the mercurial preparations over the hepatic system, and rather the liver be torpid and obstructed as in jaundice, or pouring out a redundancy of bile as in cholera, its judicious use seems equally efficacious in unloading the viscus, and restoring its secretion to a healthy state. Also chronic inflammations of the mucous and serous membranes, when accompanied by a feeble condition of the system, the alterative effects are often attended with much benefit. In many of these cases effusions have taken place; and render them in this manner the mercurial powers useful, by promoting the absorption of the effused fluid, as well as by removing the chronic inflammation on which its effusion depends.

though so slight and imperceptible as to escape notice. When Mercury acts as an alterative, there is not the least apparent disturbance of the circulation; but it also acts alternately and decidedly, it is very prone to let the brunt of its action fall on the salivary glands, causing in many instances an immoderate flow of the saliva, and constituting the condition of things denominated ptyalism. Under these circumstances, to the alterative effects of the mercury, are added those of depletion and revulsion. The depletory action is same when there is an increased secretion of saliva, or an immoderate flux of the bile; and when ptyalism cannot be induced, and either of these secretions becomes augmented, the circumstance ought to be held equally as conclusive of the condition or effects of the mercury, as if the mouth had been affected.

There is scarcely a disease to which the human race is subject, that has not been combatted by some of the preparations of this mineral, but the often empirically and without the guidance of any therapeutical principle. Nevertheless, its efficacy in certain classes of diseases is universally acknowledged.

treat of those diseases in which they have been used advantageously, or which they are generally thought proper to be employed in.

As the modus operandi of mercury, we can say nothing further than that it seems to act through the medium of the circulation, and that it possesses a peculiar alterative power over the vital functions, which enables it in many cases to subvert diseased actions by substituting its own in their place. This alterative power is sometimes exerted, without being attended with any other vital phenomena than the removal of the disease; while at other times it is attended with certain obvious effects, indicative of the agency of a potent stimulant. In the latter case its operation is marked by a quickened circulation, with a frequent pulse; by increased activity imparted to all the secretory functions, particularly those of the salivary glands and liver; by an exaltation of nervous excitability; and in short, by a general excitement of the organic force throughout the system. Where its effects are otherwise obvious than in the subversion of the disease, its operation may be presumed the same as when it produces obvious stimulating effects;

it gradually combines with oxygen, and becomes converted into protoxide; but at the temperature of ebullition it loses its oxygen, and is again reduced to its metallic state. When perfectly pure it suffers no alteration by the action of air & water; but in its ordinary state it suffers a slight tarnish. Its specific gravity is 8.6 and its equivalent number is 400. Though liquid at moderate temperatures, it freezes at 39° below zero, and boils at 662°. It is a good conductor of caloric, but its specific heat is small. Its combinations are numerous, and several of them constitute important medicines. It forms two oxides; two sulphurets; two chlorides; and one cyanuret; all of which are used in medicine, and pharmacy. In its uncombined state, it is considered to be inert; but in a state of combination it acts on the living system as a powerful and malignant irritant.

Its combinations exhibit certain general medical properties and effects, which belong to the whole class; while each individual preparation is characterized by some peculiarity in its operation. An immense number of the preparations of this mineral have been used in medical practice; few of them have been retained. I shall notice the most conspicuous which have been

Mercury

The Arabians, are perhaps, the first who employed it in medicine.
They used it in the form of lotion and ointment.
Avicenna, ventured upon the use of it internally.
It appears that Arnaldus and Theophrastus possessed some degree of knowledge of it. Dioscorides, Pliny, and Galen, mention it the latter class it among the poisons.
Mercury is found in the earth, native, combined with sulphur; united with silver; and in the form of chlorides; but of all its combinations, the most abundant is the sulphuret, or cinnabar.
Its most important mines are found at Almaden in Spain; at Idria in Austria; at Bavarsma in Hungary; and in China.
The most ancient and productive mine of mercury is in Spain. Nearly all the mercury seen in the note now so multiplied; it obtained from the native sulphuret.
It is imported into this country in large wooden bottles, containing 50 pounds each, and comes from Cadiz, and Gibraltar. In the United States it is commonly for making thermometers and barometers; for silvering looking glasses; and preparing various pharmaceutical compounds.
It is a very brilliant liquid, of a silver white colour; and without taste or smell, when heated near the boiling point

To

Richard Thornet Hall M D
Professor of
Obstetrics, and Diseases of Women
and Children
In the University of Maryland

The following pages are inscribed as a
feeble but sincere Tribute of
Respect and Gratitude
by his obliged
Friend and Pupil

The Author

An Inaugural Dissertation on Mercury

Submitted to the consideration of the Provost, Trustees and Medical Faculty of the University of Maryland

For the degree of Doctor of Physic

by

John H. Patterson

of Maryland

March 1837

a blister and ale irritations to the surface tend to produce gangrene; there are also cases, which very frequently occur, where from the deep congestion it is very difficult to produce an irritation, at least, an inflammation upon the surface; here the more active means are to be resorted to, as, cloths wrung out of boiling water, alcohol brushed from the surface, nitric acid, &c.

Finis.

fessor Mackintosh well observes, that it is is not inconsistent with good pathology to bleed and stimulate at the same time. We, however, should not employ stimulants when the congestion is slight or complicated with inflammation, and we should very narrowly watch the stage of reaction, so as to leave off the use of them in due time before inflammation has supervened; and when this does occur, which it will very frequently do, we are to treat it upon antiphlogistic principles; bleeding, local or general, epispastics, diaphoretics, refrigerants, &c.

Epispastics. These are useful in all stages of the affection, during congestion to promote determination of blood to the surface and thus unload the engorged vessels, and in inflammation for the same purpose, thus lessening the momentum of the circulation to the inflamed part. There are it is true cases where from peculiarity of constitution, dependant for the most part upon the condition of the atmosphere,

rity, the basis afforded by induction from sound physiological and pathological principles, although recently some eminent men have endeavoured to assail it; I allude to the internal employment of diffusible stimuli in congestion. How do not these act in order to the production of their effects upon the circulation? Under the influence of what power are the organs of circulation placed? Surely, what no one candems, under the influence of the nerves; then to produce their effects they must excite or increase the nervous energy; if therefore this condition depends upon loss of nervous power, and we have a means of restoring this power, even though it be but for a short time together, is not this the most legitimate agent we can employ for removing and further obviating the effects of such loss? However we are sometimes obliged to use them in order to get blood to run from a a vein in the arm. It is certainly true, as Bor-

mitted him to employ it in the same condition existing in Syphilis. Even admitting the contagious(?) nature of this disease, (and I do not know that any thing specific is further claimed) if we know that a particular condition of the system predominates in that disease, the principles of the treatment of which, under ordinary circumstances, are fully understood and acknowledged, is it not very unphilosophical to reject that plan of treatment merely because we have a notion that it is contagious? These remarks apply with equal emphasis to the whole class of Malignant & Putrid diseases.

Stimulants. We now come to speak of a class of remedies, which has been employed in this condition of the body from time immemorial, and which, not like many other points in the treatment of disease, long and universally employed and lately exploded, is, I think, destined to receive a firmer foundation than any whereon it has ever rested,

Cholera Malignæ, in Great Britain, and in this country; among whom may be mentioned the names of some of the most illustrious men who have ever adorned our Science; as, Dr. Jas. Johnson, Dr. Armstrong, Dr. Macintosh, Dr. Potter, and a host of others.

There is one thing which has very much retarded the correct treatment of typhous fever and various other diseases, viz, the idea that there is something peculiarly specific in their nature, being consequently afraid of the great bugbear, debility, giving rise to a very inconsistent plan of treating this condition as it exists in various diseases; no where is this more glaring than in a work of a very popular writer of this country, I allude to the Practice of Medicine of Professor Eberle, who, having been forced into the employment of venæsection in Cholera, became well satisfied with its eminent utility and expresses his regret that he did not adopt it sooner, yet his prejudice, supported by very sophistic logic, has not been

the use of these I shall notice presently. I do not approve of bleeding under all circumstances in congestion, for example where the patient has become exhausted from profuse, long continued, diarrhœa; and perhaps from the long continuance of the congestion,—altho I am not, by any means satisfied with the practice of bleeding in the collapsed stage of congestive diseases, may, indeed, altho I am inclined to consider it injurious, yet, having examined the point not so fully as I could wish, I am not prepared to give a decided disapprobation of it, since there are some able advocates for the practice, among whom may be reckoned the distinguished professor of Pathology and Practice of Physic in this University. Of the utility of bleeding in congestive diseases we have the concurrent testimony of some of the most eminent physicians in India, where it has prevailed very severely in the form of

strong himself, if I mistake not, the author of bleeding in congestion.
There is great opposition of opinion as to the manner in which it should be drawn, whether from a large orifice, or from a small one; on this point I am not fully prepared to give an opinion, there are arguments in favour of both each, but I am fearfully inclined to regard those in favour of the former mode as the strongest; if it should be deemed proper to draw it from a large orifice, the jugular vein would be the proper one to open, notwithstanding some deprecate the practice under all circumstances; if on the contrary it should be considered better practice to draw it from a small opening, a vein in the arm should be cut; we very frequently cannot get blood from the arm without the employment of stimulants, when it generally will flow;

The first effects of mercury in inducing ptyalism are a coppery taste in the mouth, slight soreness of the gums, and an unpleasant sensation in the sockets of the teeth when the jaws are firmly closed, soon after the gums begin to swell, a line of whitish matter is seen along their edges, and the breath is infected with a peculiar and disagreeable odour, called mercurial fetor; the saliva at the same time begins to flow; and if the affection proceeds, the gums, tongue, and throat, are much swollen; ulceration attacks the lining membrane of the mouth and fauces; the jaws become excessively painful; the tongue is coated with a thick whitish fur, and the saliva flows in streams from the mouth. It occasionally happens that the affection thus induced proceeds to an alarming and fatal extent, including extensive ulceration, gangrene, and even haemorrhage; when it will demand the particular attention of the practitioner.

The best remedies are the various detergent and astringent gargles, used sufficiently weak; as the parts are in a state of extreme irritability. In cases attended with protrusion and swelling of the tongue, the wash is applied by means of an injection with a syringe. Lead water has been found among the best local

applications in these cases; and solution of the chloride of lime or soda, while they correct the fœtor and add to the comfort of the patient, will be found to exert a curative influence on the ulcerated surfaces.

The venereal affections Mercury has been held, untill of late years, to be the only remedy on which a proper reliance can be placed, among most of the modern practitioners it is the only one resorted to for the cure of the primary stage of of the affection.

Of its operation, in the cure of this disease, we know nothing, except that it acts by substituting its specific action for that of the affection. This subject has given rise to various hypothesis, in maintenance of which their authors and advocates have evinced considerable warmth, and I will here notice the two opinions, which have been thought to possess most pretension to probability, viz: the one originally proposed by Mr John Hunter and that confirmed by Mr Benj: Bell. They are both, no doubt, liable, to many objections; but the latter, I think, the more plausible of the two.

Mr Hunter ascribes its efficacy to its general and permanent stimulant operation, whereby an action is induced and perpetuated,

incompatible with the existence of the venereal irritation. till at length the virus is eliminated from the body by the usual emunctories.

Mr Bell, who opposed this opinion with great zeal and considerable warmth, endeavoured to show that mercury produced its beneficial effects in venereal disease by neutralizing the virus. To substantiate this theory, it is obvious that he must prove, in the first place, that the ointment which is frequently, and very properly directed for the cure of this disease, is absorbed by the lymphatics; for unless the antidote is brought into contact with the poison, it is evident no good can result. From a number of experiments which have been apparently very carefully made and impartially detailed, we are, I think, justified in believing mercurial ointment is taken up of cutaneous absorption. In ordinary cases, when the infection is recent, it is usually sufficient to keep up a slight tenderness of the gums a week or ten days after the chancres are cicatrized. To accomplish this effect, it is at present customary to direct the blue pill to be taken two or three times a day. Some prefer calomel exhibited to the extent of two or three gr. daily, combined with half the quantity of opium, to prevent its running off

by the bowels. Either of these modes answer the purpose in most cases very completely, which ever is adopted it is best to persist in the use of the mercury for several days after every vestige of the complaint is removed, lest a relapse should ensue; for unless it be completely eradicated, it will infallibly reappear in a different form, but less manageable one, in a very few weeks. During the progress of the cure, it is necessary to keep the chancre perfectly clean, a solution of castile soap in warm water does very well. In some cases it becomes necessary to apply escharotics; extreme caution is requisite to avoid burning them prematurely or unnecessarily; I am satisfied that bubo is frequently occasioned by neglect of this caution.

In some cases, perhaps where the disease is complicated with a scrophulous taint, we find it impossible to remove it by the ordinary means, under such circumstances, the corrosive sublimate solution has been found exceedingly useful, while the mercurial irritation is continued, it is requisite sometimes to use tonics with great freedom. In the secondary stage of the disease, corrosive sublimate, is no doubt preferable to calomel, or the blue pill.

Sulphuret of mercury, when heated, has been found useful per

haps with some propriety, in some cases of venereal sore throat. It has been found advantageous in fumigating ulcers depending upon syphilis. It exerts a ptyalism almost immediately. A sore mouth is a very distressing affection, to shorten its duration is therefore an object of the greatest importance. Various modes have been alternately adopted and rejected, at one time Sulphur was supposed to possess sovereign virtues. It undoubtedly is useful but nothing specific was ever perceived in its operation.
All the advantages that do accrue from its employment might be assigned with propriety to its laxative property.
Dr Burton relies with great confidence upon opium; to appease the venereal irritation, he advises a grain to be taken occasionally, and the mouth to be frequently gargled with laudanum, diluted to a proper weakness, or a watery solution of opium.
The practice which some physicians prefer, is to exhibit a brisk cathartic, and apply a blister to the throat; this together with occasional use of astringent gargles, and laudanum at bed time, will in general remove the complaint.

Some practitioners have been induced to use mercury from analogy in Pleurisy, having previously experienced very beneficial effects from it in other inflammatory diseases. They direct a third of gr of opium with two gr calomel every three or four hours.

In malignant fevers also, its efficacy stands unrivalled. It would be difficult to say to whom we are indebted for its first employment. Chisholm arrogates to himself the merit of it. Of late calomel has superseded the use of all other preparations of Mercury as an internal remedy. In some cases the sweat-bagnio is a valuable auxilliary.

After having persecuted the hornets, Dr L. was next to combat the Bastillan fever by small doses of calomel exhibited with opium, at short intervals. His dose varied generally, from five to eight gr every three or four hours. He occasionally directed frictions with the ointment, and caused the gums to be made sore with calomel. The effects of this treatment were so uniformly beneficial, that in every case where salivation took place, he assures us, little else was needed than the plentiful use of nourishing food and wine.

Dr Rush, adopted this practice about the same time, the

ingenuity he shewed in defence of it; and finally his success in it, inspired confidence in its propriety. At first he relied solely on its cathartic operation, and in order to produce this effect, he added an equal or superior quantity of jalap. He conceived it to possess many advantages over every other purge. It was detergent to the bile and mucous that lined the bowels, and he thought he had reason to believe that it it acted in a peculiar manner on the biliary ducts. Was this reason that induced him to use purges to any other remedies in the incipient stage of the epidemic. He had frequently observed, that disease was prone to invade a weak part, either such debility arose spontaneously, or was dependent, originally, on a morbid action. Hence persons possessing cephalic, gastric, or hepatic predispositions, are subject to severe and dangerous attacks in the head, stomach, or liver, in all acute diseases. Influenced by this law of the animal economy, he was solicitous to induce an artificial weak part in the bowels and thus shield the liver and brain from fatal and dangerous congestion. To accomplish this end, he found it necessary in cases where the bowels were obstinately constipated, to prescribe his favourite remedy, of

"ten and ten" whereby a ptyalism was induced in a number of his patients; which was productive of an effect so salutary, as induced him in all his subsequent cases, to direct particular attention to the means of producing it. Upon his recommendation, the practice became general, and was attended with success. From that time to the present, its reputation has continued to increase.

Dr Savage remarks that "when a free salivation takes place, the patient is safe. Perhaps no one died after; and established discharge from the mouth. Experience has shown that it may be employed with more freedom than was formerly ever surmised.

Dr Hayrie, of Louisiana, recommended it in cases of a troublesome frequently exhibited; and assures us by the adoption of this practice his success in severe bilious cases, has been unprecedented. Without venturing to imitate this bold practice, I have no doubt that it may be customary hereafter to use it with more freedom.

In dysentery, none who have witnessed its unparalleled efficacy, will consent to relinquish its employment.

It appears to be a medicine peculiarly and singularly-

adapted to the management of this disease. By judicious combinations it may be made to produce all the effects that can be desired.

Combined with tart. antimon. Ipecac, or Jalap, it becomes, an unexceptionable emetic, or cathartic, with opium an excellent anodyne, and with the last and an antimonial one of the best diaphoretics we possess.

It appears to have a specific action on the liver, we as naturally resort to calomel for the cure of hepatitis, as we employ blood letting in apoplexy, and with the same happy effect.

In Colica Pictonum, it has been frequently employed, since the publication of Mr Clutterbuck's treatise on that disease. He extols it very highly, and although he was induced to employ it from a vague and untenable theory, its operation was so uniformly salutary, neither used as a cathartic, diaphoretic, or sialogogue, that few who have ventured to employ it in this painful and distressing disorder will consent to discontinue it. Mr Clutterbuck considered Colica pictonum a disease of complete exhaustion, from the sedative operation of lead, and reverts to-

Mercury as an universal stimulant. In the paralysis attending, or succeeding it, he advises strong mercurial ointment to be rubbed on the parts affected. Whether the preparations are specifically, or operates primarily, as the topical stimulants, and subsequently as a salagogue, in those cases where it has been advantageously employed, I shall not undertake to determine. It seems to me that the latter supposition is correct. The warm bath, opium, blisters, and fomentations, have been properly conjoined with it. The decisive advantages of these medicines together with the inefficiency of other modes of treatment adopted towards persons in this disease, would justify acquiescence in the propriety, safety, and expediency of the practice, which he has recommended.
Some physicians in whose erudition, candour, and sagacity, the highest confidence has been placed, have denied the use of cathartics in colica pictonum. I think, that in this instance, the reasons they allledge in justification of this opinion, do not appear to be possessed of that weight and importance which is imputed to them. I should apprehend that so great a difference does not exist between ordinary colic and colica pictonum, as to warrant a treatment so opposite.

In both the seat of the disease is the same; the symptoms are nearly alike, as is also the proximate cause, which consists in a spasmodic contractions of the intestines. The pathological analogies are still further confirmed and strengthened by the success which attends a similar mode of treatment. It might be stated in opposition to these facts, that the latter disease is induced by a specific cause; that it is attended by paralysis, and finally, that the constipation is so unyielding, as to resist, in some instances, the most active purgatives. The same effect may and does frequently arise from different and even opposite causes. Dyspepsia is induced by abstinence as well as by repletion and intemperance; vomiting is produced through the medium of the senses as well as from internal exhibitions and external applications of irritants. Colic is very properly characterized by pain in the bowels, especially by a twisting about the navel, vomiting and bound bowels, are not the symptoms of colica pictonum exactly similar in the first instances, would it be possible for the most experienced to discriminate between them. I should without hesitation give a decided negative to all these interrogatories when the disease is further advanced, and

the pain extends to the back and arms, or when palsy ensues; the treatment I admit should be different; but the disease has also changed. It is in fact a palsy accompanied by pain and constipation of the bowels, but nevertheless demanding as imperatively a rigid adherence to the employment of general and topical stimuli; as if induced by any other cause.

Consumption of the lungs is perhaps more fatal in northern and temperate latitudes, than any other disease to which we are incident. A number of years ago it was fashionable to combat it by means of mercury; the practice still is still continued, but the success which attends it, is extremely limited, before we can treat it with success it is necessary to have precise and accurate ideas of its nature, if by consumption of the lungs, we mean that disease which is occasioned by tubercles, and characterized by cough, purulent expectoration, hectic fever &c, it would be absurdly improper to employ mercury for its use. But if we extend the definition further, and mean it to consist in chronic inflammation of the lungs accompanied &c. it will perhaps authorize a different practice.

In the latter species of what may be considered the same disease, mercury may be combined with bloodletting, low diet, blisters, issues, if judiciously employed. Its operation may be analogous to issues &c by inducing a new and less dangerous action.

But where the disease depends on prophylax it may possibly accelerate a fatal termination. If practicable, it would be exceedingly useful, to discriminate between different species of the same disease, in many cases.

It has frequently been employed in hydrophobia, but like all other remedies hitherto without success. Theory would expect much from it, and perhaps we might succeed more if possible to excite salivation, after the accession of hydrophobic symptoms. The celerity with which the disease terminates fatally, has heretofore rendered this impracticable. Much was anticipated from its prophylactic virtues in hydrophobia. Experience has not however, justified the opinion which was formed of it. Here the same objection presents itself. If the disease supervened at regular and stated intervals after the infliction of the bite, we might manage the medicament

is to induce a salivation immediately. The time, however varies greatly; it has appeared in six weeks, and sometimes not until several years have elapsed.
It appears to me, if the mercurial irritation could be excited at the same time that the disease makes its first appearance, the most beneficial results might be expected. Dr Burton, I understand, originally suggested this hint, and in corroboration adduced the practice of the physicians of the west Indies, who find it necessary to induce a ptyalism, previously to the performance of amputations, having been taught by experience, that unless they adopted this precaution tetanus supervened, and speedily put an end to the lives of their patients.

It has been customary to treat Tetanus in the same manner. The propriety may very well be questioned. I have no doubt, that the free use of bark, wine, laudanum, cold bath, &c, is much better calculated to destroy the spastic rigidity of the muscles, which constitutes the disease, than any other mode of treatment hitherto recommended.
As an emmenagogue it is deserving of much notice. Dr Butter has frequently employed it with the happiest effects. He opera-

tion in the removal of this complaint is somewhat obscure, we have no reason for believing that it operates specifically on the nerves; perhaps its efficacy may be referred to its universal and permanent stimulant-operation, whereby the morbid action, which was previously concentrated, is more generally diffused.

It is very properly employed in croup, it is necessary in this disease, to exhibit it in doses sufficiently large to act on the stomach as well as the bowels.

For inducing the specific effects of mercury on the constitution, blue pill or calomel is recommended, and generally resorted to.

For producing the insensible alterative effects of the metal, a grain or two of blue pill in the twenty four hours; or from a ½ to 1½ gr. calomel; or if a gentle ptyalism be our object, from three to five gr. of the former or a gr. or two of the latter, two or three times a day. Where the bowels are irritable, it is often necessary to introduce the metal by means of friction with mercurial ointment; and where a speedy is desired, the external and internal use of the remedy may be resorted to.

Mercury is also productive of a peculiar eruption on the skin, which will be found described by the systematic writers under the various names, of hydrargyria, eczema mercuriale, lepra mercurialis &c.

An
Inaugural Dissertation
on

Phthisis Laryngea.

addressed to the
Trustees and Faculty
of the
University of Maryland
for the
Degree of Doctor of Medicine.

by
Thomas Matthews
of
Charles County, Maryland

1837

To
E. Geddings M.D.
as
A testimonial of respect for his talents,
Regard for his friendship and
Gratitude for his Kindness.

This Thesis
is respectfully dedicated
by
The Author

PHTHISIS LARYNGEA

"Nihil temere credendum nihil negligendum" - Hypoc.

Although, in my remarks on Phthisis Laryngea, it will be my endeavour to give every concomitant circumstance due consideration, yet I shall deem it a duty to be as succinct as may be consistent with perspicuity -

From the general configuration and physiological phenomena of the Larynx, one would be naturally led to anticipate much interesting matter in investigating it's Pathology - Etiology - And in this there would be no disappointment - For situated as is this organ in the anterior fauces, and reposing posteriorly in contact with the superior and anterior portion of the Pharynx - it is naturally subjected to irritations other than those, that would appear more directly applicable to itself - Protected by the contraction of it's muscles, and the valvular construction of the epiglottis, it is not liable, during it's healthy state, to suffer from the usual aliment transmitted to the Stomach through the Pharynx - But when from atmospheric vicissitudes, or from exposure to noxious and irritating vapours or gases, or from the Contact of highly Stimulating and acrid articles of food, from an

acute inflammation, neglected catarrh, whooping cough, measles, syphilis, or pressure by a tumour externally on the trachea, the excitability of the organ has been augmented, and the chain of normal relations disturbed, a chronic inflammation arises frequently, which, though at first sufficiently simple, will, if neglected, engender a train of consequences, not only harassing to the patient, and formidable to the medical attendant, but too often intractable to any means that nature has provided or art devised.
From the highly vascular state of this organ, it will be readily comprehended how the causes, above referred to, would be likely to exert any deleterious influence. When from any extraneous circumstances it has become unduly excited, the efforts, which nature invariably makes to relieve other parts of the animal economy must for the most part be futile, from the character of the function it performs:- for continually exposed to the ingress & egress of atmospheric air, the state of quiescence, so necessary for the attainment of this object, cannot be expected; and consequently one of the indispensible means of nutrition becomes a source

of continued irritation - Nor is this all - The common aliment of life having, in it's way to the stomach, to pass immediately over the Epiglottis, and contiguous to the rest of the organ, adds to the irritation generated by other causes, and necessarily, the second grand means of nutrition becomes hurtful to the dis-eased part - In considering the incompatibility of the functions of Respiration and digestion, when carried on through their natural channels, with the restoration of the larynx to it's wonted vigour, after inflammatory action has once been established, it is passing strange, that the subject has obtained so little attention -

Pathology

It is recognized by the following symptoms - A slight tickling cough, an obscure feeling of uneasiness in the larynx - occasional oppression of breathing - and slight febrile excitement in the evening - One of the first, and most constant symptoms, a change of voice, it becoming indistinct, hoarse feeble and whispering - The patient is apt to feel and press the larynx with his fingers - The first words in the morning are generally uttered with difficulty

The pain is always increased by coughing, external pressure, and inhalation of strong gases - The pain and cough are both aggravated by stimulating gargles - The cough is generally violent in the morning until something is expectorated - It is sometimes spasmodic, accompanied by stridulous breathing The commencement of swallowing, whether carefully or carelessly done, is attended with a fit of coughing - The quantity of sputa is not very great, consisting of a viscid transparent mucus - The mucous membrane assumes a livid hue, which appearance extends to the fauces and adjacent parts - The descending palate, almost invariably feeling the workings of the disease, becomes relaxed and flaccid, and disobedient to the customary stimulants - The gastrointestinal mucous membrane begins to sympathize - It's functions become disordered, and secretions vitiated. The liver ceases to perform its offices with regularity - the mesenteric glands become enlarged, digestion imperfect, ~~and~~ faeces of a light clayey colour, the tongue covered with a white fur, the lips and edges of which are redder than natural, and the pulse accelerated. In a word the system generally loses its equilibrium - Should this catenation of

symptoms receive no check, from neglect, or inadequacy of the means applied, the fauces and tongue become pale, and assume the appearance, to which the French Pathologists apply the term "Dyspherite"; ulceration attacks the larynx, and often the cartilages become the seat of ossification - Sometimes the inflammation extends to the lungs, and, under such circumstances, should tubercles lie dormant there, this acting as an exciting cause urges their developement, and tends to aggravate the distress of the wretched sufferer - The feet and hands are frequently cold - From this time, all the evidences of hectic are fully established, Armstrong to the contrary notwithstanding* - The cough in the morning is greatly aggravated, and renewed frequently through the day - Exacerbations come on about six o'clock P.M. - the cheeks become flushed, the pulse rising to about 130 or 140 in a minute, hard but not bounding, and continue until morning, then terminate in profuse perspiration, leaving the patient rather exhausted than refreshed from his sleep - The patient wastes away sensibly; the skin becomes sallow, the face pale, flushing

Dr. Armstrong, in his medical writings, denies that the evidences of hydrocephalus are present in this disease.

upon one or both cheeks — A peculiar haggard expression of countenance, irritable and dejected state of mind — Dr Armstrong says "that the respiration is more hurried than in Pulmonary Phthisis, and yet there is no fixed pain in the chest, although an undefinable load or weight is not unfrequently felt near the middle or lower part of the Sternum, and a hoarse sort of noise is made on taking a deep inspiration" — (Diagnosis)

Inattentive observers and the nonprofessional mistake this for "Tubercular Phthisis" — But those who have given consideration to the subject will find no difficulty in distinguishing between them — If due regard be given to the pain and soreness or some sort of uneasiness referred to the larynx, in combination with slightly purulent sputa, a peculiar difficulty of breathing, with oppression of the precordia, and loss or hoarseness of the voice, together with percussion and auscultation, by the former of which a clear and hollow sound, by the latter a greatly approximating respiratory murmur to the healthy state will be given, unequivocal evidence will be obtained of the absence of unhealthy degen-

-erations incidental to pulmonary consumption. The only affection with which it is liable to be confounded is Tracheal Phthisis.

Laryngeal	Tracheal
1 When the larynx is the seat of the disease, the first words in the morning are uttered with difficulty.	1 This is not the case when the trachea is the affected part
2 The pain is not increased, when the head is bent backwards, or turned around	2 Under tracheal inflammation, however, it is
3rd The cough and pain are aggravated by stimulating gargles and the inspiration of cold or damp air.	3 Such a state of things does not obtain here, - the inspiration of cold and damp air perhaps excepted.
4th In laryngeal consumption the cough is generally violent in the morning until something is expectorated	4th This does not hold good to the same degree.
5th The commencement of swallowing, whether carefully or	5 It is not so when this form is present.

done is attended with a fit of coughing

In the laryngeal variety, the quantity of the sputa is not great-

Whilst in tracheal Phthisis it is often abundant, consisting of a viscid transparent frothy mucus, with small masses of purulent matter floating through it

Prognosis

During the first stage of the disease and before ulceration has seized upon the organ, the intestinal mucous membrane become materially affected, the general circulation decidedly impressed, and the cough much exasperated, reliance can be placed in well directed treatment, and the prognosis is not allogether unfavourable-

But after these states of the system have become established, the chances of recovery are greatly diminished-

It may not be amiss for us at this stage of the investigation to institute an inquiry into some of the probable causes of a few of the physical changes

attending this disease - I humbly conceive it will not be very difficult to account for these, in a philosophical manner, if sufficient consideration be given to the organization of the larynx, and the functions by it performed - Reason and even man's existence are too frequently sacrificed to the wild vagaries of ingenious theories, by enthusiasts, who, in defending a cherished principle, forget the debt due their fellow labourers in science, suffering humanity at large, and seek only to gratify an ignoble vanity, and rear for themselves a fame, upon the ruins of opponents, without regard to consequences - That calmness of argument, which would show them the futility of attempts to build up an "ever perennial" on new hypotheses, how specious soever the sophistry by which supported, independent of truth and sound reason, is to them no welcome guest - They wander in mazes like wayward children, and instead of rescuing from darkness scientific principles, render still more impenetrable, by their mystifications, the veil of obscurity, by which they are surrounded -

Formed as is the voice in the passage of air of expiration through the larynx, where it is brought in contact

with the vocal chords, and other portions of that organ, which are urged into necessary action by the influence exerted over them by the recurrent of the eighth pair, & branches of the sympathetic, it is but natural to suppose that any change of structure would produce a sensible modification of function - Since therefore, experience has invariably taught, that the cellular membrane of that part during chronic inflammation has not only a tendency, but a constant disposition to assume the edematous character, and the inflamed mucous surface, in addition to the effusion necessary to the effecting of the above condition, itself ~~assumes~~ becomes swollen, which, as the disease advances, assumes a permanent flabbiness & that the chords, the arytenoid cartilages and the epiglottis take on a like degenerate property, it would not be rational for us to expect to find the voice of one so visited, retaining its healthy intonation - Taking it then as granted that the state of relaxation is the one to which, in the first stage of decided chronic inflammation the various parts of the larynx is prone, and this state to all intents and purposes

simulating the relaxed condition of a stringed instrument, it will require no great stretch of the imagination to perceive that the clearness & fulness of the voice will be usurped by a dull hoarseness, and after ulceration has set in, a husky whispering. Another of the changes to which it will be proper to refer, is the difficulty of swallowing. From the swollen state and loss of elasticity of the epiglottis, which is at the same time coated with a tenacious mucus, it fails to accommodate itself as readily as formerly to the solicitations of the will, when aliments are taken, and remains elevated after the depression of the tongue. The glottis being therefore left partially unprotected, the articles liquid or solid, escaping upon its inflamed and delicate surface, produce an irritation, which results in a fit of coughing. This continues until the dislodgement of the mucus, and the subsidence of the effect of the irritating substance, after which, the resistance being in some measure overcome, the epiglottis approximates more fully, and the patient finishes his meal without much additional interruption

Another of the changes to which I would beg leave to direct attention, is the sympathetic derangement of the abdominal viscera. Supplied as is the larynx with a mucous membrane from the same great division as the above organs, and receiving its quota of nervous influence from the eighth pair, which is in like manner distributed to them, it would be a matter of surprize, an inexplicable anomaly, if so great a variation in the laws of sympathy should take place, as to permit the one to perform its duties regularly, whilst the other languished, degenerated, and succumbed to fatal disorganization. The regulations of sympathy are never subjected to so inappreciable an exception, Consequently, as it has been observed elsewhere, the gastro-intestinal mucous membrane, the liver, the pancreas, and mesenteric glands respond fully to the local irritation, yielding to functional, and consecutively, organic derangement. It would be neglect unpardonable in me to leave this part of the subject, without noticing the Emaciation so characteristic of this Complaint. An intimate and unavoidable sympathy existing between the mucous surface of the intestines and

the mesenteric glands, (where the chyle previous to it's introduction into the mass of the circulating fluid, undergoes its last grand elaboration) an abnormal excitement is created in them, by the immediate relationship of the intestinal irritation, and by its continuance, an effusion of lymph takes place, induration becomes manifest, and they loose the power of performing their necessary office. The materials of animal life being consequently insufficiently & improperly supplied, the process of nutrition is dificient, the secretions are degenerate, and man is destroyed by his own absorbents, for his own support. Autopsic Appearances

The mucous membrane of the larynx, the chordæ vocales, the ligamentous connections of the cartilages, the cartilages themselves, more especially the arytenoid and epiglottis present deep excavations from protracted ulcerations. Sometimes the entire organ yeilds the same aspect, and ossification of the cartilages is not an unfrequent occurrance. The fauces are highly conjested, and numerous ul-

-cerations in their complete, as well as incipient stages are hereevident. ~~[illegible]~~
In the asophagus, a like condition may be observed. The mucous follicles of the stomach and intestines from the continued irritation, too frequently ~~[illegible]~~ up by the perturbating plan of treatment, are ~~[illegible]~~ enlarged; the liver in some measure congested, the mesenteric glands preternaturally distended and often the subject of suppuration, especially in cases when scrofula has had a latent residence. With respect to the condition of the lungs it will not be necessary to make many remarks. Chronic bronchitis will occasionally be seen, though not invariably. A degree of tubercular developement sometimes complete sometimes incipient in favourable conditions may be expected.

Treatment

Having now endeavoured to trace out the various causes by which this disease is generated, the symptoms by which it may be recognized, and the physical changes accompanying it, the next duty to be per-

-formed is to consider the indications to be kept in view during its treatment, and the most rational means of fulfilling them - The first indication to be fulfilled is to withdraw the patient as much as possible from the influence of the causes that gave rise to the affection - If he reside in a large and crowded city, it will be important to send him where he can enjoy uninterruptedly a pure and salubrious country atmosphere - If, though residing in the country, he be subjected to the vicissitudes of a cold and damp climate he must seek a situation of equable temperature, and where he will not be too much confined to a close and illy ventilated house - For as in Tuber-
-cular Phthisis, so also in this variety, every other remedial agent acts with tenfold more security, when the patient can with impunity take exercise in the open air - A veto must be put on the exertion of his colloquial powers - When he feels anxious to learn how the world goes on, a friend whose loquacity monopolizes all conversation, may be gran-

ted access to him -
In the incipient stage of the complaint, and befor the exacerbations have become violent, general bleeding will not be indicated. Should the inflammatory state, however call for it, no prudent practitioner would hesitate about it's ~~about it's~~ adoption. The means that here be likely to promise the greatest advantage, are local blood letting by leeches, and cups, repeated or not as the exigeneies of the case may demand. In the local abstraction of blood, the depletory action being exerted immediately over the affected part, and combined with the derivitive influence incidental to it, an amelioration of the disagreable symptoms is a necessary consequence. In fact our chiefest reliance is to be placed in revulsives, the list of which is extensive. When one does not succeed another must be tried. As auxiliaries to the cups and leeches, we have rubefacients, sinapisms, blisters, tartar emetic, white precipitate & veratrine ointments, frictions with croton oil, the

moxa. Issues & seatons on the back of the neck may also be employed. In order that the revulsive agency may produce a permanent benefit, it will be necessary, the means, whatsoever they may be to which recourse may be had, be persevered in sufficiently long to produce a decided impression on the diseased organ. Besides the external means of derivation, we have a division of the same class, whose action is directed to the internal organs of relation. Amongst these mercury is the most ~~beneficial~~ prominent and certainly beneficial. Its powerful influence extends to the various modifications from difference of cause; but in none do we perceive its effects more sensibly, than in the syphilitic variety. When the patient is under its use in this form of the disease, the symptoms gradually subside, even though ulceration may have taken place. From its tendency thoroughly to impress the glandular system, we cannot but expect to behold the other divisions of the affection before the chronic inflammation has terminated in ulceration, "cæteris paribus", evincing a disposition to yield under its administration. This alleviation takes place

so soon as the constitution becomes sensible of its presence, which to be effectual must be maintained for some time. In its application the following formula may not be unadvisable*; whilst four grains of the blue mass alone may be taken every morning until its effects become manifest, when its use is to be intermitted a day or two. It will be well to follow this course by a mild aperient every third day. Say Rhubarb, castor oil, or supersulphate of magnesia, according to Dr Henry's recommendation†— This may be accompanied with the endermic application of the unguentum Hydraargurum to the blistered surface opiste neck. Should considerable nervous agitation be present, without much vascular excitement, an antispasmodic, & anodyne preparation of the following kind may be given††. Under such circumstances, the stramonium unguent may be substituted for that of mercury. From the control exerted over the circulatory system by the cerated glass of antimony, the narcotics may be administered in conjunction with it, even though a moderate degree of excitement be present. The reputation ~~entertained~~ enjoyed by the nitric acid & nitro muriatic acid

* ℞

Pillulæ Hydrargyri grs ⅛

Pulv. Ipecacuanæ grs iij

Mucilaginis Astragali grs v M. ft. lineiles to be taken at night

† Dr Henry's form of preparing supersulphate of magnesia

Saturate any quantity of water with sulphate of magnesia, filter the saturated solution through paper, add to this filtered solution one seventh of the quantity of dilute sulphuric acid made by adding one part of the strong acid to seven of water, mix cautiously and thoroughly. Five drachms of this mixture to three ounces of water is a dose. to be repeated if the first fails to act.

†† ℞ Pillulæ Hydrargyri grs ⅛

Strychnine gr ½

Acetate of Morphia gr ¼

Oxalate of Cerium grs iij M. ft pillulæ, to be taken at night

taken internally, conjoined with the simultaneous use of the nitro muriatic bath, in increasing the biliary secretion and cutaneous transpiration, stimulating gently the powers of the general system, and resolving syphilitic indurations, points to them as remedial agents, likely to prove of unequivocal importance as cooperatives with mercurial preparations - With respect to the internal use of nitric acid, it may be proper to remark, that it is to be employed in the intervals of the administration of the foregoing medicine -

Before proceeding further in the discussion of this interesting subject, it is but right I should state, that objections have been advanced by Professor Dunglison, to this mode of employing the mercury and nitric acid, lest a nitrate of the metal should be formed - That there is a possibility of a small portion of the mercury's being acted on by the nitric acid, I will not take upon myself to deny - But when it is considered, that in most cases, the mercury will have performed the object of its origin, previous to the introduction of the acid; and moreover when the acid is given, it is in a state of so great dilution as to weaken its decomposing force materially, if not to destroy it altogether

and since one hear nothing of the formation of a muriate of mercury by the action of the hydrochloric acid of the gastric fluid (which it would appear to me is a thing more to be dreaded than the other) the probability of such an action is very remote - If my positions have any force in them, it follows as an inevitable corollary, that the course advised is founded on just pathological and therapeutical deductions, - and the Professor's ipse dixit on this, as on many other important topics is not theoretically correct, nor practically sound, but the result of a hallucination of a brilliant intellect - The modifications produced in the various secretions by these agents especially when combined as recommended, materially assist, in lessening the concentration of sources of irritation on the inflamed larynx - In advising a resort to the constitutional effects of mercury it is by no means desired, that it should be understood as countenancing a severe salivation - Such an abuse, for it deserves no other appellation, so far from affording the required assistance must I humbly conceive thwart all the other resources of art - For the merest tyro in medicine is aware of the

of the debilitating, aye disorganizing effects of mercury in any of its forms, when pushed to the extreme, which those, who though quaintly are justly styled Calomel Doctors, deem it proper, to obtain its "Specific action". In order that its beneficial effects may be fully experienced, it is evident that it should be resorted to, before the sympathetic irritation shall have reached and perturbated the gastro intestinal mucous surface, for the state of the organs then resembling their inflamed condition from other causes, could not fail to be increased by it; and consequently the idea of prescribing it for the relief of the liver & mesenteric glands under such circumstances is absurd. These remarks will apply with equal force to the employment of nitric acid - although the bath may be continued throughout the entire disease - Should indurations of the glands present themselves during the progress of the malady, the solution of the muriate of Ammonia as spoken of by Dr Eberle, may be taken *

After the ulcerated process has set in the use of the foregoing remedies must be used ~~with~~ but with due caution, for the powers of the system may not be adequate

℞ Muriate of Ammonia ℥ij

Pulv. Extract of Glycyr. ℥j

Tart. Ant. & Potas. gr. j

Aqua fontana ℥viij m. ft. solutio. dete a tête

spoonful every four hours during the day

to repel any detrimental dominion, an improper use might give them - Much reliance cannot be placed in other internal remedies, if we except the classes of demulcents and inhalations - The former from their lubricating nature ward off extraneous matters from the inflamed membrane, and by continuous sympathy send their soothing influence further, than it would be expedient for themselves to pervade - The common gum arabic emulsion to which when the parts put on a sluggish appearance, it will be well to add some slight stimulant, may be given - When the dyspthritous aspect becomes evident, the epiglottis coated with a thick viscid mucus, and the ulcerated process decided, the muriatic acid, as recommended by Stokes of Dublin will tend greatly to assuage the vexatiousness of the cough, by disloging the mucus from its situation, and changing the apthous condition of the parts - These two effects are produced, the former by the natural tendency of the acid to coagulate the animal matter, the latter by the gentle stimulus it imparts - whenever the ulcerations can be reached, they may be touched with strong acid by means of a camel hair pencil - A

gargle of ten drops of the acid to two teaspoonsfull of water may be used for the parts out of sight. That considerable relief has been obtaind from an application of this kind my own experience can testify. Those who prefer it may substitute a saturated solution of chloride of sodium. Should the tonsils and fauces suffer from inflammatory action, as most probably they will, scarifications must be resorted to, or leeches applied through a quill as often as necessary. In case the uvula become much relaxed, and not obedient to the ordinary stimulants, excission is the only alternative (Cooper Lisfranc Physic) Lisfranc and Physic go so far as to say that some cases of Laryngeal Phthisis have been cured by this alone. Such cases, it would seem, must have arisen, and been protracted by the relaxed uvula. By the bye, in the foregoing state of ulceration and when the internal employment of mercury might have been unsafe, I saw in one case decided advantage derived from its endermic application in conjunction with fumigations of cinnabar. the disease evidently remitting upon the system becoming affected. Although the considerations of fumigations

as adjuvants in the treatment of this disease might, without much impropriety, have been taken up immediately after demulcents, yet I think this the most appropriate place for their introduction - When properly applied they furnish a means of soothing distressing symptoms with less disturbance to the patient than any other medicaments, - When During chronic Inflammation the steam of hot water + vinegar or laudanum, increase the natural secretion of the part calm down nervous irritation remove irritating matters + excite a pleasurable sensation through the wearied frame # - When undisguised nervous impressibility is present, as is evidenced by the spasmodic + stridulous cough, together with agitation from slight external causes, the sulphuric ether vapour ought to have a fair trial - The fumes of tar might also be of service after the ulcerations appearance Some have recommended chlorine gas in this stage - Both the tar and chlorine being looked upon as disinfectants, it would be well not to neglect them - besides what I have already mentioned - Stramonium has some advocates, and a host of others may be of utility at different stages of the complaint -

In administering the inhalation it is well to know that the vessels in which medicaments are placed should be so arranged as to be adapted to the expanded mouth as a funnel, while the small aperture remains free for the patient to inhale from

From the high favour in which the copaiva mixture stands with Dr Eberle in chronic gastro enteritis, as well as in chronic bronchitis, I am inclined to believe it would be observeable in this affection.* Not having had, however an opportunity of testing its powers it is impossible for me to speak positively on the subject—

As at this time the patient is apt to be troubled with exhausting night sweats, ten or twelve drops of elixir vitriol diluted may be used immediately before retiring— The "Prunus Virginiana" having obtaind considerable repute in suppressing night sweats and producing other important changes in the system, a trial may be given it— The aforementioned author ~~mention~~ recommends the cold infusion to be used. ~~and~~ An ounce of the bark is to be infused in cold water for twenty four hours, and an ounce and a half of the infusion to be given every four hours— He says "it lessens the frequency, tension, and irritated state of the pulse; moderates the cough and profuse nocturnal perspirations; checks the diarrhea and sustains the general health"— Its beneficial effects no doubt depend on the prussic it contains— To aid the above remedies in ful—

℞ Bals. Copaiv. ℥iss

P. Cubebae ℥iss

Syrup. limonis ℥ss

Aquae fontanae ℥viij

Tinct. opii camph. gtts xxx m. ft. mixtura. Dose a table spoonful twice daily

-filling their intention, the acetate of lead may be employed with some considerable degree of confidence - The thirst may be quenched by suffering ice to melt on the tongue, much drink being likely to excite coughing - The dietetic management of the patient will be of the utmost importance - Farinaceous articles of food, milk and soft-boiled eggs, fresh oysters &c &c may be allowed - Occasionally it may be necessary to introduce the nutriment into the stomach through the gum elastic tube - Sea bathing, from the shock it gives to the system, the determination it causes to the surface, and its bracing effects generally; exercise on horseback, the sufferer being comfortably clad, are no despicable agents - Notwithstanding, however a rigid adherence to the foregoing rules, they will frequently be found unavailing - For the larynx still continuing in the performance of its functions, the perfect quietude so requisite for its' recuperation is wanting. - How may this be obtained? Are there any means, to which resort may be had with probability of success - Silence as before recommended will be of some avail, but will not answer entirely - Can anything else be tried? There is one other means, the efficacy of which, though generally

acknowledged, and spoken of in terms of the highest com-
-mendation, yet from some unaccountable negligence on
the part of the Surgeon, has seldom been practised. I
have reference to Bronchotomy. By some it is thought that
laryngotomy might effect the object equally well, and
as there is not so much danger of wounding large
vessels, in it's performance, a decided preference is given
it by them. Did each present like probabilities of suc-
-cess, laryngotomy would undoubtedly from the greater
facility of operating, and the less danger of wounding
important bloodvessels, be greatly preferable to Bron-
-chotomy. But when we reflect, that the operation is
performed, in order that the function of respiration may
be carried on without the implication of the larynx,
a state of quiescence produced, by which nature will
have an opportunity of setting up a restorative action
in the part, it is impossible to conceive how laryngot-
-omy, which must necessarily generate an immense
source of irritation immediately in the diseased organ,
can promise any considerable benefit. Mr. Coopers re-
marks, on this subject being so very much to the point

I deem it unnecessary to offer an apology for their introduction here - He says "I also agree with Flajani, in condemning laryngotomy in croup and angina, because the wound should be made away from the seat of inflammation*" - again "In old persons, the cartilages of the larynx may be ossified, and difficulty may be experienced in dividing them; nor can the thyroid cartilage be slit open without some risk of injuring the chordæ vocales - In cases of cynanche laryngea, the swelled and thickened state of the lining membrane of the larynx, and the impropriety of cutting the inflamed parts themselves, are strong objections, to this mode of operating, which is not more eligible, when the object is to inflate the lungs"† - In those sentiments of Cooper & Flajani I most cordially concur - So clear and conclusive are they, that comment would be superfluous - As in the event of the operation being undertaken, the design would be merely to make a passage for the air, the incision in the trachea need not exceed half an inch in length - In making the integumentary incision, a beginning may be made just below the inferior lobes of

* First lines of Surgery vol. 2nd p 32
† p 33

the thyroid gland, and extended downward about three quarters of an inch - Each Sterno-thyroideus & hyoideus muscle must be then pushed a little towards its own side of the neck, and a longitudinal wound of the size above specified made into the front of the trachea - The knife should neither be carried to the right, nor to the left - By this mode of procedure, all risk of injuring the large lateral vessels will be avoided. The incision should never extend too near the Sternum lest the subclavian vein & artery, and a fifth thyroid, that sometimes comes of from the primitive carotid, or subclavian innominata, or aorta be wounded -

Aware of the facility with which degenerations, in other parts of the body give way, under favourable circumstances and well directed remedies, it seems, that though the cartilages be reduced to the state of ossification, a chance of material relief may be expected by bringing therapeutical and surgical means to aid nature's resources - Should the ravages of disease, notwithstanding all the endeavours of the practitioner, urge on unimpeddly towards a fatal termination, it will then become his duty

to give fair scope to the agency of palliatives, and exert all his endeavours, to calm down the distress of the wretched sufferer, and smooth for him the pathway to immortality from this land of afflictions and tears.